



88064793

aeromet

MONTHLY PROGRESS REPORT NO. 19
for the period September 1-30, 1977
to
ENVIRONMENTAL PROTECTION AGENCY
REGION VIII

1860 Lincoln St., Suite 900
Denver, CO 80203

Contract No. 68-01-1946

Utah U-a/U-b Tract

aeromet inc.

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JAN 18 1978

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by

AEROMET, INC.
P.O. Box 45447
Tulsa, OK 74145

Utah U-a/U-b Tract

RECEIVED
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1.0 INTRODUCTION

Low level temperature and wind data were collected for September, 1977 at the U-a/U-b Tract, Utah. The data were collected using a 30 gm helium filled pilot balloon with a temperature sonde attached, a single theodolite and a TSR-2 receiver/recorder twice a day every other day. The observations were scheduled for $\frac{1}{2}$ hour after sunrise and 1400L.

The pilot balloon had an ascent rate of 500 ft/min and it was tracked by a single theodolite for 12 minutes with the azimuth and elevation angles recorded every 30 seconds on a cassette tape recorder. The tape was transcribed to a pilot balloon form after the observation.

The temperature sonde operated at 403 MHz and the signal was received by a ground plane antenna at least 24 ft AGL which was attached to the Aeromet, Inc. TSR-2 receiver/recorder. The TSR-2 receiver has a built-in Rustrak strip chart recorder and the temperature was recorded within the range from -50°C to $+50^{\circ}\text{C}$. A baseline temperature calibration was performed with each T-Sonde by the adjustment of the recorded temperature to match the thermometer measured temperature next to the transmitting sonde. Once the calibration check was finished the balloon was released with the sonde attached and the temperature was recorded for at least 20 minutes. At the completion of each observation the data were mailed to Aeromet, Inc.

The collected temperature and wind data are accurate and have not been edited unless otherwise stated in the Pilot Balloon Summary Section. However, the obvious errors sometimes found in the recorded azimuth and elevation angles are corrected without mention. For example, the sequence of azimuth angles . . . 76.6, 75.3, 47.8, 73.8 . . . can be corrected without ambiguity. The more ambiguous errors are brought to the attention of the reader if editing has been performed, otherwise, the data are left as recorded and the filtering is left to the individual user. An example is the wind profile for Hanksville on 06/29/76 at 1300 MST found in the Monthly Progress Report No. 4. The azimuth angles starting 30 seconds after the launch and incremented by the same are as follows . . . 109.0, 110.0, 110.0, 281.0, 280.0, 282.0 . . . , while the corresponding elevation angles are as follows . . . 60.0, 57.6, 58.7, 58.6, 52.7, 44.3 The wind speed and direction change dramatically over the interval as can be seen in the report since these data were not edited.

2.0 DATA SUMMARY

2.1 Utah U-a/U-b Tract Field Summary

On September 26th and 27th the data collection site was moved 5 miles north to the town of Bonanza. Data collection should not have been interrupted as the site was functional on September 26th and 28th. A 7% loss of wind data and 3% loss of temperature data did occur however, as a result of the new observer's lack of time to practice with the equipment.

Eighty-seven percent of the scheduled launches were attempted by the observers which resulted in 84% recovery of the temperature data and 77% recovery of the wind data. A 3% loss in wind data resulted from equipment problems while high winds caused an additional 13% loss. Thirteen percent of the temperature data were also lost due to high winds at the U-a/U-b Tract.

2.2 Mixing Layer Height

The average mixing layer height was computed for the morning and afternoon based on the morning and 1400L temperature soundings. The balloon release $\frac{1}{2}$ hour after sunrise is near enough to the minimum temperature to assume the correctness of the calculated mixing layer heights. The afternoon balloon release is generally not at the time of maximum heating and the user of the mixing layer height data must be aware that minor changes in the calculated values can be expected. Without equipping the field sites with minimum/maximum thermometers the extrapolation of the afternoon data can not be justified in establishing a data base for statistical analysis. The approximation of the afternoon maximum temperature would be a "calculated guess" for there are: 1) local effects which are to be determined and would be filtered out with extrapolation, 2) mountain effects which alter the lower 1500m (e.g. downslope effects), and 3) meteorological effects which can alter the expected change in the sounding (e.g. advection, moisture, etc.).

It is felt that to better define the mixing layer height that a variety of "heat island" effects should be viewed. The rigorous method would be to define 15 "heat island" effects ranging from 0 to 14°C and let the user decide which would best serve his needs. However, for these analyses 0°, +5° and +10° "heat island" effects are calculated and listed for the morning and afternoon soundings in the table Average Mixing Layer Height.

The symbol N/D means that no mixing layer height was defined and sfc is the abbreviation for surface.

2.3 Stability and Inversion Classification

The temperature and wind data were edited to remove data felt to cause anomalous results in the stability and inversion classification schemes. Only the stations listed prior to the table classifying the inversions were used in the calculations.

3.0 DATA PROCESSING

3.1 Printed and Plotted Output

Wind speeds and directions are computed from the azimuth and elevation angles measured while tracking the balloon with the theodolite. The wind speed and direction are plotted versus height and printed out at 30 second intervals. The printed output includes the AGL and MSL height of the calculated wind value and the orthogonal components of the wind. The wind profile is also punched on computer cards at 30 second intervals.

The temperature data are processed and plotted with the temperature and the lapse rate per 300 meters versus height at 15 second intervals. Tic marks are placed on the temperature plot at significant levels. A solid line to the right side of the plot indicates the data for that layer are interpolated temperature values. The temperature data are also printed out and punched on cards. The asterisk beside a height value indicates a significant level while a "?" indicates interpolated data.

The temperature data are also processed to produce for this site a monthly summary of inversion layers and lapse rates within the inversions and from the inversion base to the surface by means of the Holzworth classification scheme for inversions (Holzworth, G.C., 1974: "Climatological Data on Atmospheric Stability in the United States" Paper presented at the American Meteorological Society Symposium on Atmospheric Diffusion and Air Pollution, September 9-13, 1974. Santa Barbara, California.)

The temperature and wind data are processed together to produce for this site a monthly average bivariate frequency distribution of wind direction versus wind speed represented in the 500m layer adjacent to the ground. The distribution is presented by the six Pasquill stability classes (A-F) and a summary independent of stability. If the $\Delta T/100m$ criterion is met but the wind speed criterion is not met, then the

STABILITY CLASS	ΔT (°C/100m)	WIND SPEED
A	<-1.9	<2
B	-1.9 - -1.7	<5
C	-1.7 - -1.5	<6
D	-1.5 - -0.5	ALL SPEEDS
E	-0.5 - 1.5	<5
F	>1.5	<3

wind data are checked against the criterion for the next stability class, always cascading to the D stability class. Once the wind speed criterion is met the data are classified under the new stability class even though now the lapse rate exceeds the class criterion. For example,

if the $\Delta T/100\text{m}$ value is 1.7 and the wind speed is 7 m/s, the lapse rate criterion is met for the stability class F, however the wind speed criterion is exceeded. The wind speed is greater than the 5 m/s maximum limit for class E but falls within the criterion of class D, which includes all wind speeds. As a result the observational data with a ΔT value of 1.7°C/100 m and a wind speed value of 7 m/s are classified under stability class D, not class F.

The data are also punched on computer cards in a format compatible with the STAR PROGRAM of the National Climatic Center, NOAA, U.S. Department of Commerce.

3.2 Punched Output

The punched temperature, pressure and wind data for each observation are categorized into four groups, each separated by a blank card. The first group begins with a header card listing the station name (3A4), the station elevation in meters (I4), the month, date and year (I6), the observation time (I4), the time zone (A3), the balloon ascent rate in feet per minute (I3), the sampling interval in seconds (I2), the temperature error in °C (F5.1), the T-Sonde I.D. number (I5) and the surface wind speed in kts and direction (2F6.1). A surface wind speed of 180.0 KTS indicates missing surface wind data. The series of cards prior to the first blank card include on each card the elapse time in minutes (2X,F5.1), the height of the balloon in meters AGL (4X,F5.0), the height of the balloon in meters MSL (4X,F5.0), the temperature in °C (4X,F6.2), the change in temperature between standard or significant levels (2X,F6.2), the lapse rate per 300m (2X,F6.2), the difference in the lapse rate per 300m and the dry adiabatic lapse rate per 300m (2X,F6.2), the wind speed in m/s if known (4X,F5.1), and the wind direction if known (3X,F5.0). The cards following the first blank card include on each card the elapse time in minutes (2X,F5.1), the height in meters AGL (4X,F5.0), the height in meters MSL (4X,F5.0), the u-component of the wind in m/s (4X,F6.1), the v-component of the wind in m/s (6X,F6.1), the wind speed in m/s (7X,F5.1), the wind direction (6X,F5.0), the elevation angle in degrees (F5.1) and the azimuth angle in degrees (F5.1). The cards after the second blank card include a header card like before and a series of cards with four groups of the following on each card; the height in meters AGL (F6.1), the temperature in °C (F6.2), the lapse rate °C/300m (F6.2) and a blank space (1X). The cards after the third blank card include a header card the same as described earlier, eight cards with the original digitized temperature data and a flag to indicate interpolated data (20(F3.1,I1)), five cards with the elevation angle in degrees (16F5.1), and five cards with the azimuth angle in degrees (16F5.1). The temperature data are in degrees Celsius and have 50°C added to each value. An elevation angle of 180° indicates a missing azimuth and elevation angle value.

The punched output from the bivariate frequency distribution calculations include a header card as illustrated below,

MONTH: MARCH YEAR: 1976. CASTER SEC TO 500 METERS

[illegible]

and the punched distribution data for each wind direction under each stability class in agreement with the "star" output. The stability classes are number coded as follows:

STABILITY CLASS	NUMBER CODE
A	1
B	2
C	3
D	4
E	5
F	6
Independent of Stability	7

The station I.D. numbers are as follows:

STATION	I.D. NUMBER
Casper, Wyoming	1
Colorado C-b Tract	2
Craig, Colorado	3
Escalante, Utah	4
Hanksville, Utah	5
Rock Springs, Wyoming	6
Utah U-a/U-b Tract	7

The month and season number codes are as follows:

MONTH	1-12
SEASON	13 = DJF
	14 = MAM
	15 = JJA
	16 = SON
ANNUAL	17

PILOT BALLOON SUMMARY
Utah U-a/U-b Tract
September, 1977

September 2	0545	
	1350	
September 4	0546	
	1350	
September 6	0550	Temperature values were interpolated over the interval from 9 to 12 1/2 minutes.
	1350	
September 8	0550	No wind data due to equipment problems.
	1350	
September 10	0552	Temperature values were interpolated over the interval from 7 3/4 to 11 minutes.
	1350	Temperature values were interpolated over the interval from 9 3/4 to 12 3/4 minutes.
September 12	0554	Temperature values were interpolated over the interval from 7 1/2 to 10 1/2 minutes.
	AFTN	
September 14	0555	
	1350	Temperature values were interpolated over the intervals from 7 to 9 1/2 minutes and 10 1/2 to 12 1/2 minutes.
September 16	0555	Temperature values were interpolated over the interval from 26 1/4 to 27 1/4 minutes.
	1400	High winds caused cancellation of launch after two attempts by observer.
September 18	0559	
	1350	

PILOT BALLOON SUMMARY
Utah U-a/U-b Tract
September, 1977

September 20	0601	
	AFTN	No observations taken due to high winds.
September 22	0603	Temperature values were interpolated over the interval from 3 3/4 to 6 1/4 minutes.
	1350	Temperature values were interpolated over the intervals from 19 1/2 to 21 1/4 minutes and 26 3/4 to 27 3/4 minutes.
September 24	0605	
	1350	
September 26	0606	
	AFTN	No observations taken due to high winds.
September 28	MORN	New observer missed morning launch.
	1400	No wind data.
September 30	0715	
	1415	

AVERAGE MIXING LAYER HEIGHT

Utah U-a/U-b Tract

September, 1977

HEIGHT IN METERS

DATE	MORNING			AFTERNOON		
	0'	+5'	+10'	0'	+5'	+10'
2	sfc	200m	600m	1300m	2100m	2950m
4	50m	1150m	3200m	1500m	3100m	N/D
6	sfc	150m	500m	850m	2250m	4150m
8	sfc	150m	1650m	sfc	2000m	2750m
10	sfc	200m	750m	2650m	N/D	N/D
12	sfc	200m	950m			
14	sfc	150m	550m	1500m	4150m	N/D
16	sfc	150m	550m			
18	sfc	250m	850m	300m	1450m	2750m
20	sfc	100m	250m			
22	sfc	200m	600m	200m	1400m	N/D
24	sfc	150m	250m	200m	1650m	3250m
26	sfc	1100m	N/D			
28				1700m	2300m	3750m
30	sfc	3150m	N/D	sfc	2000m	3400m

CLOUD COVER AND SIGNIFICANT WEATHER

Utah U-a/U-b Tract

September, 1977

<u>DATE</u>	<u>MORNING</u>	<u>AFTERNOON</u>
2	clear	scattered
4	clear	scattered
6	scattered	scattered
8	scattered	scattered
10	broken; rain northwest	broken
12	scattered; light fog	
14	clear	broken
16	clear	broken
18	clear	clear
20	clear	
22	overcast	overcast
24	scattered	scattered
26	overcast	
28		scattered
30	overcast	clear

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5269

DATE 09/02/77 TIME 05 45MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	419.	1.09	0.0

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5279

DATE 09/02/77 TIME 13 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
1319.	1471.	0.18	-0.98

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5654

DATE 09/04/77 TIME 05 46MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
76.	114.	0.0	-0.36

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5664

DATE 09/04/77 TIME 13 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
310.	348.	0.0	-1.33

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5662

DATE 09/06/77 TIME 05 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	991.	0.56	0.0

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5660

DATE 09/06/77 TIME 13 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5660

DATE 09/06/77 TIME 13 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE
METERS AGLINV TOP
METERS AGLINV DT/DZ
(DEG C)/100MDT/DZ BELOW INV
(DEG C)/100M

306.

344.

0.0

-1.15

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5663

DATE 09/08/77 TIME 05 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE
METERS AGLINV TOP
METERS AGLINV DT/DZ
(DEG C)/100MDT/DZ BELOW INV
(DEG C)/100M

0.

267.

1.55

0.0

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5659

DATE 09/08/77 TIME 13 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE
METERS AGLINV TOP
METERS AGLINV DT/DZ
(DEG C)/100MDT/DZ BELOW INV
(DEG C)/100M

0.

76.

0.55

0.0

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5674

DATE 09/10/77 TIME 05 52MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE
METERS AGLINV TOP
METERS AGLINV DT/DZ
(DEG C)/100MDT/DZ BELOW INV
(DEG C)/100M

0.

495.

0.91

0.0

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5672

DATE 09/10/77 TIME 13 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

THERE ARE NO INVERSION BASES WITHIN 1500M OF THE SFC

LAYER BASE
METERS AGLLAYER TOP
METERS AGLDT/DZ
(DEG C)/100M0.
100.
250.
500.
750.
1000.100.
250.
500.
750.
1000.
1500.-1.84
-1.03
-0.86
-1.04
-1.11
-0.98

1000.

1500.

-0.98

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5658

DATE 09/12/77 TIME 05 54MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE
METERS AGLINV TOP
METERS AGLINV DT/DZ
(DEG C)/100MDT/DZ BELOW INV
(DEG C)/100M

0.

267.

1.11

0.0

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5656

DATE 09/14/77 TIME 05 55MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE
METERS AGLINV TOP
METERS AGLINV DT/DZ
(DEG C)/100MDT/DZ BELOW INV
(DEG C)/100M

0.

343.

1.65

0.0

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5673

DATE 09/14/77 TIME 13 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE
METERS AGLINV TOP
METERS AGLINV DT/DZ
(DEG C)/100MDT/DZ BELOW INV
(DEG C)/100M

1414.

1490.

0.36

-1.06

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5657

DATE 09/16/77 TIME 05 55MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE
METERS AGLINV TOP
METERS AGLINV DT/DZ
(DEG C)/100MDT/DZ BELOW INV
(DEG C)/100M

0.

533.

0.98

0.0

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5653

DATE 09/18/77 TIME 05 59MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE
METERS AGLINV TOP
METERS AGLINV DT/DZ
(DEG C)/100MDT/DZ BELOW INV
(DEG C)/100M

0.

190.

1.49

0.0

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5655

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5655

DATE 09/18/77 TIME 13 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE
METERS AGLINV TOP
METERS AGLINV DT/DZ
(DEG C)/100MDT/DZ BELOW INV
(DEG C)/100M

125.

170.

0.0

-1.57

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5670

DATE 09/20/77 TIME 06 01MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE
METERS AGLINV TOP
METERS AGLINV DT/DZ
(DEG C)/100MDT/DZ BELOW INV
(DEG C)/100M

0.

419.

1.99

0.0

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5668

DATE 09/22/77 TIME 06 03MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE
METERS AGLINV TOP
METERS AGLINV DT/DZ
(DEG C)/100MDT/DZ BELOW INV
(DEG C)/100M

0.

419.

1.11

0.0

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5666

DATE 09/22/77 TIME 13 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE
METERS AGLINV TOP
METERS AGLINV DT/DZ
(DEG C)/100MDT/DZ BELOW INV
(DEG C)/100M

1359.

1550.

0.44

-0.73

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5676

DATE 09/24/77 TIME 06 05MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE
METERS AGLINV TOP
METERS AGLINV DT/DZ
(DEG C)/100MDT/DZ BELOW INV
(DEG C)/100M

0.

610.

1.57

0.0

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5667

DATE 09/24/77 TIME 13 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5667

DATE 09/24/77 TIME 13 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
229.	267.	0.0	-0.90

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5671

DATE 09/26/77 TIME 06 06MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	114.	1.02	0.0

UTAH UAUB

ELEV 1676 METERS

SOUNDING ID 5665

DATE 09/28/77 TIME 14 00MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

THERE ARE NO INVERSION BASES WITHIN 1500M OF THE SFC

LAYER BASE METERS AGL	LAYER TOP METERS AGL	DT/DZ (DEG C)/100M
0.	100.	-1.53
100.	250.	-1.05
250.	500.	-0.84
500.	750.	-1.04
750.	1000.	-0.96
1000.	1500.	-0.81

UTAH UAUB

ELEV 1676 METERS

SOUNDING ID 0

DATE 09/30/77 TIME 07 15MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	114.	1.13	0.0

UTAH UAUB

ELEV 1676 METERS

SOUNDING ID 5686

DATE 09/30/77 TIME 14 15MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

THERE ARE NO INVERSION BASES WITHIN 1500M OF THE SFC

LAYER BASE METERS AGL	LAYER TOP METERS AGL	DT/DZ (DEG C)/100M
0.	100.	-0.24
100.	250.	-0.76

UTAH UAUB

ELEV 1676 METERS

SOUNDING ID 5686

DATE 09/30/77 TIME 14 15MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

THERE ARE NO INVERSION BASES WITHIN 1500M OF THE SFC

LAYER BASE METERS AGL	LAYER TOP METERS AGL	DT/DZ (DEG C)/100M
0.	100.	-0.24
100.	250.	-0.76
250.	500.	-0.39
500.	750.	-0.53
750.	1000.	-0.97
1000.	1500.	-0.92

MONTH SEPTEMBER YEAR 1977 UTAH UAUB SFC TO 500 METERS

NORMALIZED FREQUENCY DISTRIBUTION

DIRECTION	0-3	4-6	7-10	SPEED (METER/SEC)			GREATER THAN 21	AVERAGE SPEED	TOTAL
				11-16	17-21				
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AVG SPEED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RELATIVE FREQUENCY OF OCCURRENCE OF THE A STABILITY CLASS IS 0.0

RELATIVE FREQUENCY OF CALM 0.0

A TOTAL OF 2 SOUNDINGS FROM A SAMPLE OF 25 SOUNDINGS DID NOT HAVE 500 M OF TEMP AND WIND DATA

MONTH SEPTEMBER YEAR 1977 UTAH UAUB SFC TO 500 METERS

NORMALIZED FREQUENCY DISTRIBUTION

DIRECTION	0-3	4-6	7-10	SPEED (METER/SEC)		17-21	GREATER THAN 21	AVERAGE SPEED	TOTAL
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AVG SPEED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RELATIVE FREQUENCY OF OCCURRENCE OF THE B STABILITY CLASS IS 0.0

RELATIVE FREQUENCY OF CALM 0.0

A TOTAL OF 2 SOUNDINGS FROM A SAMPLE OF 25 SOUNDINGS DID NOT HAVE 500 M OF TEMP AND WIND DATA

MONTH SEPTEMBER YEAR 1977 UTAH UAUB SFC TO 500 METERS

NORMALIZED FREQUENCY DISTRIBUTION

DIRECTION	0-3	4-6	7-10	11-16	17-21	GREATER THAN 21	AVERAGE SPEED	TOTAL
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AVG SPEED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RELATIVE FREQUENCY OF OCCURRENCE OF THE C STABILITY CLASS IS 0.0

RELATIVE FREQUENCY OF CALM 0.0

A TOTAL OF 2 SOUNDINGS FROM A SAMPLE OF 25 SOUNDINGS DID NOT HAVE 500 M OF TEMP AND WIND DATA

MONTH SEPTEMBER YEAR 1977 UTAH UAUB SFC TO 500 METERS

NORMALIZED FREQUENCY DISTRIBUTION

DIRECTION	0-3	4-6	7-10	11-16	17-21	GREATER THAN 21	AVERAGE SPEED	TOTAL
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.08	0.0	0.0	12.4	0.08
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.08	0.0	0.0	0.0	6.2	0.08
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.08	0.0	0.0	10.5	0.08
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.17	0.0	0.0	0.0	0.0	5.5	0.17
W	0.0	0.0	0.08	0.0	0.0	0.0	9.3	0.08
WNW	0.25	0.08	0.0	0.0	0.0	0.0	2.6	0.33
NW	0.0	0.08	0.0	0.0	0.0	0.0	4.1	0.08
NNW	0.0	0.0	0.08	0.0	0.0	0.0	7.5	0.08
AVG SPEED	2.3	4.6	7.6	11.5	0.0	0.0		0.0
TOTAL	0.25	0.33	0.25	0.17	0.0	0.0		1.00

RELATIVE FREQUENCY OF OCCURRENCE OF THE D STABILITY CLASS IS 0.52

RELATIVE FREQUENCY OF CALM 0.0

A TOTAL OF 2 SOUNDINGS FROM A SAMPLE OF 25 SOUNDINGS DID NOT HAVE 500 M OF TEMP AND WIND DATA

MONTH SEPTEMBER YEAR 1977 UTAH UAUB SFC TO 500 METERS

NORMALIZED FREQUENCY DISTRIBUTION

DIRECTION	0-3	4-6	7-10	11-16	17-21	GREATER THAN 21	AVERAGE SPEED	TOTAL
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.11	0.0	0.0	0.0	0.0	0.0	1.7	0.11
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.11	0.11	0.0	0.0	0.0	0.0	2.7	0.22
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.22	0.11	0.0	0.0	0.0	0.0	2.2	0.33
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.11	0.0	0.0	0.0	0.0	0.0	2.7	0.11
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.11	0.0	0.0	0.0	0.0	0.0	1.4	0.11
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.11	0.0	0.0	0.0	0.0	0.0	0.4	0.11
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AVG SPEED	1.6	3.4	0.0	0.0	0.0	0.0		0.0
TOTAL	0.78	0.22	0.0	0.0	0.0	0.0		1.00

RELATIVE FREQUENCY OF OCCURRENCE OF THE E STABILITY CLASS IS 0.39

RELATIVE FREQUENCY OF CALM 0.0

A TOTAL OF 2 SOUNDINGS FROM A SAMPLE OF 25 SOUNDINGS DID NOT HAVE 500 M OF TEMP AND WIND DATA

MONTH SEPTEMBER YEAR 1977 UTAH UAUB SFC TO 500 METERS

NORMALIZED FREQUENCY DISTRIBUTION

DIRECTION	0-3	4-6	7-10	SPEED (METER/SEC)			GREATER THAN 21	AVERAGE SPEED	TOTAL
				11-16	17-21				
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.50
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0
SSW	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.50
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AVG SPEED	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00

RELATIVE FREQUENCY OF OCCURRENCE OF THE F STABILITY CLASS IS 0.09

RELATIVE FREQUENCY OF CALM 0.0

A TOTAL OF 2 SOUNDINGS FROM A SAMPLE OF 25 SOUNDINGS DID NOT HAVE 500 M OF TEMP AND WIND DATA

MONTH SEPTEMBER YEAR 1977 UTAH UAUB SFC TO 500 METERS

NORMALIZED FREQUENCY DISTRIBUTION

DIRECTION	0-3	4-6	7-10	11-16	17-21	GREATER THAN 21	AVERAGE SPEED	TOTAL
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.04	0.0	0.0	0.04	0.0	0.0	7.1	0.09
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.04	0.04	0.0	0.0	0.0	0.0	2.7	0.09
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.13	0.04	0.04	0.0	0.0	0.0	2.8	0.22
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.09	0.0	0.0	0.04	0.0	0.0	5.2	0.13
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.04	0.09	0.0	0.0	0.0	0.0	4.1	0.13
W	0.0	0.0	0.04	0.0	0.0	0.0	9.3	0.04
WNW	0.17	0.04	0.0	0.0	0.0	0.0	2.2	0.22
NW	0.0	0.04	0.0	0.0	0.0	0.0	4.1	0.04
NNW	0.0	0.0	0.04	0.0	0.0	0.0	7.5	0.04
AVG SPEED	1.8	4.2	7.6	11.5	0.0	0.0		0.0
TOTAL	0.52	0.26	0.13	0.09	0.0	0.0		1.00

NORMALIZED FREQUENCY DISTRIBUTION INDEPENDENT OF STABILITY

RELATIVE FREQUENCY OF CALM 0.0

A TOTAL OF 2 SOUNDINGS FROM A SAMPLE OF 25 SOUNDINGS DID NOT HAVE 500 M OF TEMP AND WIND DATA

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5269

DATE 09/02/77 TIME 05 45MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	TEMP DEG C	D/T STD	D/T 300M	D/T LAPSE	WS M/S	WD DEG
	SFC		11.63		0.0		2.6	160.
1.0	150	1735	14.09	2.46	4.85	7.77	2.2	151.
2.0	300	1885	15.28	1.19	2.14	5.06	0.4	134.
2.7	415.	2000.	15.92	0.90	-0.36	2.57	0.6	176.
3.3	500	2085	15.74	-0.44	-0.71	2.22	1.2	137.
6.0	915.	2500.	14.83	-0.73	-1.25	1.68	4.3	176.
9.3	1415.	3000.	12.83	-2.18	-1.26	1.67	8.8	208.
15.8	2415.	4000.	5.68	-7.15	-2.59	0.34		
22.1	3415.	5000.	-3.01	-8.70	-4.38	-1.45		
28.4	4415.	6000.	-7.70	-4.69	-5.03	-2.11		

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5269

DATE 09/02/77 TIME 05 45MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	U-COMP M/S	V-COMP M/S	WIND SPEED M/S	WIND DIR DEG
0.0	0.	1585.	-0.9	2.4	2.6	160.
0.5	76.	1661.	-2.2	3.0	3.7	144.
1.0	152.	1737.	-1.0	1.9	2.2	151.
1.5	229.	1814.	-0.7	-0.1	0.7	84.
2.0	305.	1890.	-0.2	0.3	0.4	138.
2.5	381.	1966.	0.2	0.6	0.6	198.
3.0	457.	2042.	-0.3	0.6	0.7	149.
3.5	533.	2118.	-1.2	1.0	1.6	129.
4.0	610.	2195.	-1.2	1.3	1.8	139.
4.5	686.	2271.	-1.1	3.0	3.2	159.
5.0	762.	2347.	-1.2	4.2	4.3	164.
5.5	838.	2423.	-0.7	4.1	4.2	170.
6.0	914.	2499.	-0.3	4.3	4.3	176.
6.5	991.	2576.	-0.2	4.3	4.3	177.
7.0	1067.	2652.	-0.4	4.3	4.3	174.
7.5	1143.	2728.	0.1	4.6	4.6	181.
8.0	1219.	2804.	2.0	5.4	5.7	200.
8.5	1295.	2880.	3.0	6.2	6.9	206.
9.0	1372.	2957.	3.9	7.4	8.4	208.
9.5	1448.	3033.	4.4	8.1	9.2	209.
10.0	1524.	3109.	4.6	7.6	8.9	211.
10.5	1600.	3185.	4.2	7.6	8.7	209.
11.0	1676.	3261.	3.9	7.7	8.6	207.
11.5	1753.	3338.	3.8	8.1	8.9	205.
12.0	1829.	3414.	3.2	7.7	8.3	202.

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5279

DATE 09/02/77 TIME 13 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	TEMP DEG C	D/T STD	D/T 300M	D/T LAPSE	WS M/S	WD DEG
	SFC		31.33		0.0		2.1	270.
0.8	150	1735	29.12	-2.21	-3.97	-1.04	3.2	271.
1.4	300	1885	27.89	-1.23	-6.17	-3.25	1.7	267.
1.8	415.	2000.	25.86	-1.97	-5.54	-2.61	1.4	278.
2.1	500	2085	25.63	-0.29	-2.88	0.05	1.8	288.
4.6	915.	2500.	21.52	-3.74	-3.81	-0.88	2.0	294.
7.6	1415.	3000.	18.70	-3.19	-0.18	2.75	4.8	202.
14.1	2415.	4000.	14.01	-4.68	-0.18	2.75		
20.7	3415.	5000.	12.10	-1.92	-3.61	-0.69		
27.0	4415.	6000.	5.11	-6.98	2.22	5.15		

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5279

DATE 09/02/77 TIME 13 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	U-COMP M/S	V-COMP M/S	WIND SPEED M/S	WIND DIR DEG
0.0	0.	1585.	2.1	0.0	2.1	270.
0.5	76.	1661.	3.7	-1.0	3.9	285.
1.0	197.	1782.	2.7	0.4	2.7	262.
1.5	328.	1913.	1.4	0.0	1.4	269.
2.0	483.	2068.	1.4	-0.4	1.5	286.
2.5	596.	2181.	3.2	-1.6	3.6	297.
3.0	672.	2257.	1.7	-2.1	2.7	322.
3.5	748.	2333.	3.0	-2.1	3.6	305.
4.0	825.	2410.	3.6	-0.5	3.7	278.
4.5	906.	2491.	1.8	-0.7	2.0	292.
5.0	988.	2573.	1.8	-1.5	2.4	310.
5.5	1082.	2667.	0.9	-1.4	1.7	327.
6.0	1165.	2750.	-0.2	-0.9	0.9	11.
6.5	1243.	2828.	1.2	0.2	1.2	260.
7.0	1319.	2904.	1.0	2.8	3.0	200.
7.5	1395.	2980.	1.2	4.3	4.5	196.
8.0	1471.	3056.	3.8	4.3	5.8	221.
8.5	1547.	3132.	3.2	4.3	5.3	217.
9.0	1624.	3209.	2.9	4.0	4.9	216.
9.5	1700.	3285.	3.1	3.7	4.8	220.
10.0	1776.	3361.	3.3	3.6	4.9	222.
10.5	1852.	3437.	3.2	3.8	5.0	220.
11.0	1937.	3522.	3.5	3.7	5.1	223.
11.5	2018.	3603.	4.8	2.5	5.4	242.
12.0	2094.	3679.	2.7	1.2	2.9	246.

UTAH UAU8

ELEV 1585 METERS

SOUNDING ID 5654

DATE 09/04/77 TIME 05 46MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	TEMP DEG C	D/T STD	D/T 300M	D/T LAPSE	WS M/S	WD DEG
	SFC		13.28		0.0		2.6	160.
1.0	150	1735	12.83	-0.45	-0.90	2.03	2.4	159.
2.0	300	1885	12.37	-0.46	-1.26	1.66	2.8	282.
2.7	415.	2000.	11.63	-0.55	-1.45	1.48	3.8	296.
3.3	500	2085	11.19	-0.63	-2.18	0.75	2.2	282.
6.0	915.	2500.	8.39	-2.78	-2.75	0.17	1.8	348.
9.3	1415.	3000.	4.83	-3.58	-2.42	0.51	3.9	26.
15.8	2415.	4000.	-2.73	-7.56	-1.91	1.02		
22.3	3415.	5000.	-8.00	-5.27	-1.93	0.99		

UTAH UAU8

ELEV 1585 METERS

SOUNDING ID 5654

DATE 09/04/77 TIME 05 46MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	U-COMP M/S	V-COMP M/S	WIND SPEED M/S	WIND DIR DEG
0.0	0.	1585.	-0.9	2.4	2.6	160.
0.5	76.	1661.	-1.4	3.1	3.4	156.
1.0	152.	1737.	-0.9	2.3	2.4	159.
1.5	229.	1814.	1.0	0.4	1.1	248.
2.0	305.	1890.	2.8	-0.7	2.9	285.
2.5	381.	1966.	3.9	-1.7	4.2	294.
3.0	457.	2042.	2.9	-1.5	3.3	298.
3.5	533.	2118.	1.3	0.0	1.3	269.
4.0	610.	2195.	0.6	0.9	1.0	214.
4.5	686.	2271.	0.2	0.1	0.2	255.
5.0	762.	2347.	0.2	-1.1	1.2	351.
5.5	838.	2423.	0.5	-1.9	2.0	345.
6.0	914.	2499.	0.4	-1.8	1.8	348.
6.5	991.	2576.	0.0	-1.9	1.9	360.
7.0	1067.	2652.	0.8	-2.8	2.9	344.
7.5	1147.	2732.	-0.2	-3.5	3.5	4.
8.0	1223.	2808.	-0.9	-3.1	3.2	17.
8.5	1299.	2884.	-1.1	-3.1	3.3	19.
9.0	1376.	2961.	-1.4	-3.1	3.4	25.
9.5	1452.	3037.	-1.9	-3.8	4.3	27.
10.0	1528.	3113.	-2.2	-4.6	5.1	26.
10.5	1604.	3189.	-2.1	-4.9	5.4	23.
11.0	1680.	3265.	-2.2	-4.7	5.2	25.
11.5	1757.	3342.	-1.8	-4.6	4.9	22.
12.0	1833.	3418.	-1.8	-4.0	4.4	24.

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5664

DATE 09/04/77 TIME 13 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	TEMP DEG C	D/T STD	D/T 300M	D/T LAPSE	WS M/S	WD DEG
	SFC		27.14		0.0		1.5	270.
0.7	150	1735	24.42	-2.72	-3.41	-0.48	2.6	280.
1.4	300	1885	23.01	-1.41	-1.71	1.22	3.4	294.
2.2	415.	2000.	22.66	-0.18	-2.06	0.86	2.7	301.
2.7	500	2085	22.23	-0.61	-3.45	-0.52	2.1	301.
5.3	915.	2500.	18.16	-4.06	-3.52	-0.59	3.2	132.
7.9	1415.	3000.	13.10	-5.06	-2.16	0.77	2.8	18.
14.3	2415.	4000.	6.34	-6.77	-2.22	0.71		
20.9	3415.	5000.	0.26	-6.08	-1.32	1.61		
27.2	4415.	6000.	-6.92	-7.18	-3.47	-0.54		

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5664

DATE 09/04/77 TIME 13 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	U-COMP M/S	V-COMP M/S	WIND SPEED M/S	WIND DIR DEG
0.0	0.	1585.	1.5	0.0	1.5	270.
0.5	76.	1661.	1.4	-0.2	1.4	277.
1.0	229.	1814.	3.7	-0.9	3.8	283.
1.5	310.	1895.	3.0	-1.4	3.3	296.
2.0	386.	1971.	2.7	-1.4	3.0	298.
2.5	463.	2048.	1.7	-1.2	2.1	306.
3.0	539.	2124.	1.8	-0.9	2.1	297.
3.5	622.	2207.	0.9	0.6	1.1	238.
4.0	700.	2285.	-0.6	-1.4	1.5	22.
4.5	787.	2372.	-0.4	-2.6	2.6	9.
5.0	867.	2452.	0.2	-3.2	3.2	357.
5.5	943.	2528.	-0.2	-3.3	3.3	4.
6.0	1032.	2617.	0.3	-4.1	4.2	356.
6.5	1113.	2698.	0.8	-1.2	1.5	328.
7.0	1224.	2809.	0.6	-2.4	2.4	347.
7.5	1341.	2926.	-0.2	-2.4	2.4	5.
8.0	1425.	3010.	-1.0	-2.7	2.9	20.
8.5	1501.	3086.	-0.9	-3.3	3.4	15.
9.0	1577.	3162.	-1.4	-2.8	3.1	26.
9.5	1654.	3239.	-2.1	-1.7	2.7	51.
10.0	1730.	3315.	-1.9	-1.0	2.1	62.
10.5	1806.	3391.	-1.8	-0.6	1.9	70.
11.0	1894.	3479.	-2.1	-0.3	2.1	83.
11.5	1976.	3561.	-2.7	-0.2	2.7	87.
12.0	2062.	3647.	-2.7	-0.3	2.7	83.

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5662

DATE 09/06/77 TIME 05 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	TEMP DEG C	D/T STD	D/T 300M	D/T LAPSE	WS M/S	WD DEG
	SFC		11.91		0.0		2.1	160.
1.0	150	1735	14.37	2.46	5.72	8.65	2.7	121.
2.0	300	1885	16.55	2.18	2.30	5.23	2.1	175.
2.5	* 380	1965	17.09		0.53	3.46		
2.7	415.	2000.	16.82	0.27	-0.88	2.04	0.8	195.
3.3	500	2085	16.64	-0.18	-0.18	2.75	0.9	154.
6.0	915.	2500.	17.45	0.72	-0.53	2.40	1.8	211.
6.5	* 990	2575	17.45		-0.53	2.40		
9.3	1415.	23000.	14.92	-2.43	-1.25	1.68	1.0	211.
15.7	2415.	4000.	7.65	-7.27	-3.49	-0.57		
21.9	3415.	5000.	-0.13	-7.78	-1.32	1.60		
28.3	4415.	6000.	-7.41	-7.28	-2.51	0.42		

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5662

DATE 09/06/77 TIME 05 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	U-COMP M/S	V-COMP M/S	WIND SPEED M/S	WIND DIR DEG
0.0	0.	1585.	-0.7	1.9	2.1	160.
0.5	76.	1661.	-2.5	3.5	4.3	144.
1.0	152.	1737.	-2.3	1.3	2.6	120.
1.5	229.	1814.	-1.2	2.0	2.4	150.
2.0	305.	1890.	-0.1	2.1	2.1	177.
2.5	381.	1966.	0.3	1.0	1.1	195.
3.0	457.	2042.	0.1	0.5	0.5	194.
3.5	533.	2118.	-1.1	0.7	1.3	122.
4.0	610.	2195.	-1.9	-0.3	1.9	80.
4.5	686.	2271.	-1.1	-0.9	1.5	50.
5.0	762.	2347.	0.5	-0.5	0.7	315.
5.5	838.	2423.	0.6	0.7	0.9	221.
6.0	914.	2499.	0.9	1.5	1.8	211.
6.5	991.	2576.	0.9	1.3	1.6	216.
7.0	1067.	2652.	0.6	0.9	1.1	217.
7.5	1143.	2728.	0.7	0.6	0.9	231.
8.0	1219.	2804.	0.7	0.5	0.9	234.
8.5	1295.	2880.	0.7	0.7	1.0	225.
9.0	1372.	2957.	0.6	0.8	0.9	216.
9.5	1448.	3033.	0.5	1.0	1.1	206.
10.0	1524.	3109.	0.8	0.6	1.0	232.
10.5	1600.	3185.	0.8	0.1	0.8	265.
11.0	1676.	3261.	0.6	0.7	0.9	222.
11.5	1753.	3338.	0.3	0.8	0.8	204.
12.0	1829.	3414.	0.1	0.9	0.9	185.

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5660

DATE 09/06/77 TIME 13 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	TEMP DEG C	D/T STD	D/T 300M	D/T LAPSE	WS M/S	WD DEG
	SFC		30.50		0.0		4.1	270.
0.8	150	1735	28.03	-2.47	-3.66	-0.73	4.5	273.
1.5	300	1885	26.97	-1.06	-1.00	1.92	3.7	301.
2.2	415.	2000.	25.86	-0.68	-2.52	0.40	3.3	322.
2.8	500	2085	25.45	-0.84	-2.20	0.73	3.2	315.
5.3	915.	2500.	21.87	-3.58	-0.69	2.24	M	M
8.6	1415.	3000.	18.97	-2.91	-1.75	1.18	M	M
15.1	2415.	4000.	11.91	-6.87	-2.35	0.58	2.1	180.
21.5	3415.	5000.	4.83	-7.27	-2.41	0.52		
27.7	4415.	6000.	-1.18	-6.01	-1.52	1.41		

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5660

DATE 09/06/77 TIME 13 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	U-COMP M/S	V-COMP M/S	WIND SPEED M/S	WIND DIR DEG
0.0	0.	1585.	4.1	0.0	4.1	270.
0.5	76.	1661.	3.2	-0.1	3.2	272.
1.0	221.	1806.	5.8	-0.3	5.8	273.
1.5	306.	1891.	3.0	-1.9	3.6	303.
2.0	382.	1967.	2.1	-2.4	3.2	319.
2.5	458.	2043.	1.9	-2.8	3.4	326.
3.0	534.	2119.	2.5	-1.8	3.1	306.
3.5	613.	2198.	3.5	-1.1	3.7	287.
4.0	693.	2278.	3.3	-2.5	4.1	306.

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5663

DATE 09/08/77 TIME 05 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	TEMP DEG C	D/T STD	D/T 300M	D/T LAPSE	WS M/S	WD DEG
	SFC		18.52		0.0		1.0	235.
1.0	150	1735	22.14	3.62	1.38	4.30	M	M
1.8	* 266	1851	22.66		-0.17	2.76		
2.0	300	1885	22.40	0.27	-0.52	2.41	M	M
2.7	415.	2000.	21.97	-0.44	-1.03	1.89	M	M
3.3	500	2085	21.62	-0.34	-2.59	0.33	M	M
6.0	915.	2500.	18.00	-3.62	-3.34	-0.42	M	M
9.2	1415.	3000.	14.65	-3.35	-1.43	1.50	M	M
15.8	2415.	4000.	7.37	-7.28	-2.21	0.72		
22.1	3415.	5000.	-1.09	-8.45	-3.03	-0.11		
28.0	4415.	6000.	-10.86	-9.77	-3.12	-0.19		

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5663

DATE 09/08/77 TIME 05 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	U-COMP M/S	V-COMP M/S	WIND SPEED M/S	WIND DIR DEG
0.0	0.	1585.	0.8	0.6	1.0	235.

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5659

DATE 09/08/77 TIME 13 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	TEMP DEG C	D/T STD	D/T 300M	D/T LAPSE	WS M/S	WD DEG
	SFC		30.33		0.0			
1.0	150	1735	29.68	-0.66	-2.46	0.47	13.7	270.
2.0	300	1885	28.84	-0.84	-2.65	0.28	7.2	265.
2.7	415.	2000.	27.90	-0.68	-1.83	1.10	6.9	263.
3.3	500	2085	27.24	-0.92	-2.34	0.59	7.5	261.
5.8	915.	2500.	23.01	-4.20	-4.79	-1.86	4.1	258.
7.8	1415.	3000.	18.52	-4.52	-2.81	0.12	9.1	278.
14.4	2415.	4000.	14.83	-3.69	-1.07	1.86		
20.9	3415.	5000.	10.71	-4.12	-2.00	0.93		
27.3	4415.	6000.	1.79	-8.92	-1.88	1.05		

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5659

DATE 09/08/77 TIME 13 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	U-COMP M/S	V-COMP M/S	WIND SPEED M/S	WIND DIR DEG
0.0	0.	1585.	5.1	0.0	5.1	270.
0.5	76.	1661.	9.0	0.2	9.0	269.
1.0	152.	1737.	13.8	1.2	13.9	265.
1.5	229.	1814.	13.2	1.6	13.3	263.
2.0	305.	1890.	6.8	1.1	6.8	261.
2.5	381.	1966.	6.1	0.7	6.1	264.
3.0	457.	2042.	7.7	1.0	7.8	262.
3.5	533.	2118.	7.2	1.2	7.2	261.
4.0	610.	2195.	5.8	0.4	5.8	266.
4.5	686.	2271.	4.8	0.6	4.8	263.
5.0	767.	2352.	4.7	1.5	4.9	253.
5.5	857.	2442.	4.2	1.5	4.4	250.
6.0	959.	2544.	3.9	0.4	3.9	265.
6.5	1068.	2653.	4.6	-0.9	4.6	281.
7.0	1221.	2806.	11.3	-0.9	11.3	275.
7.5	1365.	2950.	11.6	-0.7	11.7	274.
8.0	1445.	3030.	7.5	-1.4	7.6	280.
8.5	1521.	3106.	7.8	-0.9	7.9	277.
9.0	1597.	3182.	8.7	-0.3	8.7	272.
9.5	1673.	3258.	11.3	-0.3	11.3	271.
10.0	1750.	3335.	12.0	-0.1	12.0	270.
10.5	1826.	3411.	13.8	-0.1	13.8	271.
11.0	1902.	3487.	14.8	0.2	14.8	269.
11.5	1978.	3563.	16.0	0.1	16.0	270.
12.0	2054.	3639.	16.0	0.1	16.0	270.

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5674

DATE 09/10/77 TIME 05 52MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	TEMP DEG C	D/T STD	D/T 300 M	D/T LAPSE	WS M/S	WD DEG
	SFC		13.74		0.0		2.6	160.
1.0	150	1735	15.54	1.80	4.99	7.91	2.8	116.
2.0	300	1885	16.82	1.27	1.41	4.34	5.7	136.
2.7	415.	2000.	18.07	1.16	0.70	3.63	3.5	108.
3.3	* 495	2080	18.25		-0.88	2.05		
3.3	500	2085	17.75	-0.23	-1.06	1.87	1.8	73.
6.0	915.	2500.	15.01	-2.10	-3.03	-0.10	1.8	25.
9.3	1415.	23000.	12.56	-3.09	-1.62	1.30	3.6	116.
15.8	2415.	4000.	6.06	-6.50	-2.59	0.34		
22.3	3415.	5000.	-2.05	-8.10	-3.61	-0.69		
28.7	4415.	6000.	-9.87	-7.82	-2.92	0.01		

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5674

DATE 09/10/77 TIME 05 52MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	U-COMP M/S	V-COMP M/S	WIND SPEED M/S	WIND DIR DEG
0.0	0.	1585.	-0.9	2.4	2.6	160.
0.5	76.	1661.	-1.0	1.4	1.8	144.
1.0	152.	1737.	-2.6	1.2	2.8	115.
1.5	229.	1814.	-3.9	3.5	5.3	132.
2.0	305.	1890.	-4.0	4.2	5.8	136.
2.5	381.	1966.	-4.0	2.9	5.0	126.
3.0	457.	2042.	-1.8	-0.1	1.8	85.
3.5	533.	2118.	-1.7	-0.8	1.9	64.
4.0	610.	2195.	-1.6	-1.1	1.9	54.
4.5	686.	2271.	-0.8	-1.6	1.8	28.
5.0	762.	2347.	-0.5	-1.5	1.6	19.
5.5	838.	2423.	-0.4	-1.2	1.3	16.
6.0	914.	2499.	-0.8	-1.7	1.8	25.
6.5	991.	2576.	-1.1	-1.9	2.2	30.
7.0	1068.	2653.	-0.9	-2.1	2.3	22.
7.5	1144.	2729.	-1.0	-1.5	1.8	35.
8.0	1220.	2805.	-1.8	-0.8	2.0	66.
8.5	1296.	2881.	-2.7	-0.4	2.8	83.
9.0	1372.	2957.	-3.1	0.4	3.2	98.
9.5	1449.	3034.	-3.0	2.6	4.0	130.
10.0	1525.	3110.	3.2	2.2	3.8	235.
10.5	1601.	3186.	3.3	2.7	4.3	231.
11.0	1677.	3262.	3.2	3.6	4.8	222.
11.5	1753.	3338.	2.3	4.0	4.6	210.
12.0	1830.	3415.	2.5	3.7	4.5	214.

UTAH UAU8

ELEV 1585 METERS

SOUNDING ID 5672

DATE 09/10/77 TIME 13 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	TEMP DEG C	D/T STD	D/T 300M	D/T LAPSE	WS M/S	WD DEG
	SFC		29.58		0.0		4.6	270.
0.7	150	1735	27.18	-2.40	-4.86	-1.93	7.0	267.
1.3	300	1885	25.57	-1.62	-3.04	-0.11	6.6	256.
2.0	415.	2000.	24.14	-0.98	-2.90	0.03	3.8	254.
2.6	500	2085	23.81	-0.77	-3.94	-1.01	4.1	254.
4.7	915.	2500.	18.61	-4.29	-4.37	-1.44	3.8	233.
6.5	1415.	3000.	12.83	-5.55	-6.29	-3.36	3.9	212.
10.7	2415.	24000.	5.58	-8.38	-1.86	1.07	5.4	201.
17.3	3415.	5000.	-0.32	-5.90	-2.65	0.28		
23.0	4415.	6000.	-7.91	-7.59	2.52	5.44		

UTAH UAU8

ELEV 1585 METERS

SOUNDING ID 5672

DATE 09/10/77 TIME 13 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	U-COMP M/S	V-COMP M/S	WIND SPEED M/S	WIND DIR DEG
0.0	0.	1585.	4.6	0.0	4.6	270.
0.5	76.	1661.	5.0	0.1	5.0	268.
1.0	229.	1814.	9.1	0.6	9.2	266.
1.5	333.	1918.	5.2	1.8	5.5	251.
2.0	410.	1995.	3.6	1.0	3.8	254.
2.5	489.	2074.	4.0	1.2	4.2	254.
3.0	570.	2155.	3.5	0.9	3.6	256.
3.5	670.	2255.	3.6	1.2	3.8	251.
4.0	771.	2356.	2.6	1.3	3.0	243.
4.5	876.	2461.	2.7	2.1	3.4	233.
5.0	1005.	2590.	3.7	2.8	4.6	232.
5.5	1132.	2717.	3.1	2.4	4.0	232.
6.0	1257.	2842.	1.9	2.7	3.4	215.
6.5	1404.	2989.	2.0	3.2	3.7	212.
7.0	1579.	3164.	2.7	5.2	5.9	208.
7.5	1746.	3331.	1.5	5.6	5.8	195.
8.0	1875.	3460.	1.3	6.2	6.3	192.
8.5	1984.	3569.	0.0	4.9	4.9	180.
9.0	2116.	3701.	2.7	5.0	5.7	209.
9.5	2226.	3811.	2.9	5.3	6.0	208.
10.0	2302.	3887.	1.4	4.4	4.6	198.
10.5	2379.	3964.	1.5	4.8	5.0	197.
11.0	2455.	4040.	2.4	5.4	5.9	204.
11.5	2531.	4116.	2.9	5.7	6.4	207.
12.0	2607.	4192.	3.9	5.2	6.5	217.

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5658

DATE 09/12/77 TIME 05 54MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	TEMP DEG C	D/T STD	D/T 300M	D/T LAPSE	WS M/S	WD DEG
	SFC		8.39		0.0		1.5	45.
1.0	150	1735	10.25	1.86	2.36	5.29	2.0	89.
1.8	* 266	1851	11.36		-0.36	2.57		
2.0	300	1885	11.18	0.93	-0.73	2.20	2.5	45.
2.7	415.	2000.	11.17	-0.19	0.18	3.11	1.7	58.
3.3	500	2085	11.00	0.01	-0.91	2.02	1.2	55.
6.0	915.	2500.	9.32	-1.58	-0.73	2.20	0.8	34.
9.3	1415.	?3000.	8.40	-1.02	-0.55	2.38	4.4	326.
15.8	2415.	4000.	2.74	-5.65	-2.06	0.87		
22.3	3415.	5000.	-4.87	-7.61	-1.92	1.01		
28.8	4415.	6000.	-9.87	-5.00	-2.92	0.01		

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5658

DATE 09/12/77 TIME 05 54MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	U-COMP M/S	V-COMP M/S	WIND SPEED M/S	WIND DIR DEG
0.0	0.	1585.	-1.1	-1.1	1.5	45.
0.5	76.	1661.	-0.9	0.9	1.3	135.
1.0	152.	1737.	-2.0	-0.1	2.0	88.
1.5	229.	1814.	-2.0	-1.6	2.6	52.
2.0	305.	1890.	-1.7	-1.7	2.5	45.
2.5	381.	1966.	-1.8	-1.2	2.1	55.
3.0	457.	2042.	-1.0	-0.5	1.2	62.
3.5	533.	2118.	-1.0	-0.8	1.3	49.
4.0	610.	2195.	-0.9	-1.1	1.4	40.
4.5	686.	2271.	-1.1	-1.2	1.7	41.
5.0	762.	2347.	-1.5	-0.8	1.7	62.
5.5	838.	2423.	-0.4	0.0	0.4	94.
6.0	914.	2499.	-0.4	-0.7	0.8	33.
6.5	991.	2576.	-1.2	-1.3	1.8	41.
7.0	1067.	2652.	-1.9	-1.7	2.6	48.
7.5	1143.	2728.	-2.0	-1.9	2.8	48.
8.0	1219.	2804.	-0.9	-3.0	3.1	17.
8.5	1295.	2880.	3.1	-0.7	3.1	283.
9.0	1372.	2957.	2.2	-2.2	3.1	316.
9.5	1448.	3033.	2.4	-4.9	5.5	334.
10.0	1524.	3109.	2.0	-5.7	6.0	340.
10.5	1600.	3185.	1.7	-6.3	6.5	345.
11.0	1676.	3261.	1.7	-6.6	6.8	346.
11.5	1753.	3338.	1.2	-7.2	7.3	350.
12.0	1829.	3414.	1.2	-7.6	7.7	351.

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5656

DATE 09/14/77 TIME 05 55MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	TEMP DEG C	D/T STD	D/T 300M	D/T LAPSE	WS M/S	WD DEG
	SFC		5.07		0.0		2.6	160.
1.0	150	1735	8.92	3.86	3.77	6.69	1.8	137.
2.0	300	1885	10.54	1.62	1.60	4.53	2.5	233.
2.3	* 342	1927	10.74		0.36	3.28		
2.7	415.	2000.	9.92	-0.53	-1.43	1.50	4.1	206.
3.3	500	2085	9.83	-0.19	-0.54	2.39	5.9	200.
6.0	915.	2500.	8.92	-0.64	-1.08	1.85	8.2	221.
9.3	1415.	3000.	7.00	-2.19	-1.27	1.66	6.5	231.
15.8	2415.	4000.	-0.55	-7.55	-2.24	0.69		
22.3	3415.	5000.	-7.81	-7.27	-4.57	-1.64		
28.3	4415.	6000.	-14.77	-6.96	-2.52	0.41		

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5656

DATE 09/14/77 TIME 05 55MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	U-COMP M/S	V-COMP M/S	WIND SPEED M/S	WIND DIR DEG
0.0	0.	1585.	-0.9	2.4	2.6	160.
0.5	76.	1661.	-2.4	2.8	3.7	140.
1.0	152.	1737.	-1.2	1.3	1.8	137.
1.5	229.	1814.	0.2	1.1	1.1	193.
2.0	305.	1890.	2.1	1.5	2.5	235.
2.5	381.	1966.	1.6	2.9	3.3	210.
3.0	457.	2042.	1.8	4.7	5.0	201.
3.5	533.	2118.	2.2	6.2	6.6	199.
4.0	610.	2195.	2.4	5.6	6.1	203.
4.5	686.	2271.	3.1	5.1	6.0	211.
5.0	762.	2347.	4.9	5.6	7.4	222.
5.5	838.	2423.	5.2	5.9	7.9	221.
6.0	914.	2499.	5.3	6.2	8.2	221.
6.5	991.	2576.	5.2	5.0	7.2	227.
7.0	1067.	2652.	6.8	4.5	8.2	237.
7.5	1143.	2728.	7.0	4.0	8.1	240.
8.0	1219.	2804.	6.1	4.1	7.3	236.
8.5	1295.	2880.	5.2	4.0	6.6	232.
9.0	1372.	2957.	4.9	4.5	6.6	227.
9.5	1448.	3033.	5.2	3.9	6.5	233.
10.0	1524.	3109.	4.6	2.6	5.2	241.
10.5	1600.	3185.	5.1	2.0	5.5	249.
11.0	1676.	3261.	5.8	1.9	6.1	252.
11.5	1753.	3338.	5.6	1.2	5.7	258.
12.0	1830.	3415.	7.5	1.7	7.7	257.

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5673

DATE 09/14/77 TIME 13 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	TEMP DEG C	D/T STD	D/T 300M	D/T LAPSE	WS M/S	WD DEG
	SFC		25.09		0.0		4.6	330.
0.7	150	1735	22.30	-2.79	-5.52	-2.60	2.9	329.
1.2	300	1885	20.68	-1.62	-4.69	-1.76	5.8	309.
1.6	415.	2000.	19.14	-1.30	-4.72	-1.80	5.9	311.
2.0	500	2085	18.50	-0.87	-4.04	-1.11	3.7	311.
3.9	915.	2500.	14.65	-3.84	-3.93	-1.00	2.7	289.
6.3	1415.	3000.	10.34	-4.32	0.0	2.93	7.1	235.
12.4	2415.	4000.	2.56	-7.78	-3.93	-1.01		
18.2	3415.	5000.	-6.14	-8.69	-2.89	0.04		
24.0	4415.	6000.	-11.35	-5.22	-1.95	0.98		

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5673

DATE 09/14/77 TIME 13 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	U- COMP M/S	V- COMP M/S	WIND SPEED M/S	WIND DIR DEG
0.0	0.	1585.	2.3	-4.0	4.6	330.
0.5	76.	1661.	0.3	-1.1	1.1	346.
1.0	242.	1827.	4.1	-3.1	5.2	307.
1.5	385.	1970.	5.0	-4.4	6.7	312.
2.0	499.	2084.	2.8	-2.4	3.6	311.
2.5	606.	2191.	3.5	-3.4	4.9	315.
3.0	702.	2287.	2.9	-1.5	3.3	298.
3.5	810.	2395.	2.5	-1.0	2.7	292.
4.0	935.	2520.	2.6	-0.9	2.7	289.
4.5	1037.	2622.	0.6	0.3	0.7	240.
5.0	1149.	2734.	0.5	0.3	0.6	237.
5.5	1279.	2864.	2.8	0.1	2.8	268.
6.0	1376.	2961.	6.6	2.2	7.0	252.
6.5	1452.	3037.	4.6	5.6	7.3	219.
7.0	1528.	3113.	-2.3	7.0	7.4	162.
7.5	1605.	3190.	-2.4	6.8	7.2	161.
8.0	1681.	3266.	-2.6	6.9	7.3	159.
8.5	1757.	3342.	-2.6	7.3	7.7	160.
9.0	1833.	3418.	-3.2	7.4	8.0	157.
9.5	1909.	3494.	-3.3	7.6	8.3	157.
10.0	1986.	3571.	-3.6	7.0	7.9	153.
10.5	2062.	3647.	-4.5	6.4	7.8	145.
11.0	2142.	3727.	-4.2	6.2	7.5	146.
11.5	2241.	3826.	-3.8	6.2	7.2	149.
12.0	2338.	3923.	-3.5	5.9	6.9	149.

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5657

DATE 09/16/77 TIME 05 55MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	TEMP DEG C	D/T STD	D/T 300M	D/T LAPSE	WS M/S	WD DEG
	SFC		4.83		0.0			
1.0	150	1735	8.39	3.56	3.68	6.61	2.6	160.
2.0	300	1885	8.67	0.29	1.10	4.03	3.8	175.
2.7	415.	2000.	9.23	0.56	1.83	4.75	3.0	150.
3.3	500	2085	10.03	0.80	0.37	3.29	3.3	181.
3.5	* 533	2118	10.07		0.37	3.29	5.8	174.
6.0	915.	2500.	8.02	-1.62	-2.94	-0.01		
9.3	1415.	3000.	3.98	-4.42	-2.61	0.32	8.5	204.
15.7	2415.	4000.	-3.50	-7.50	-2.87	0.06	9.2	218.
22.0	3415.	5000.	-9.97	-6.47	-1.75	1.18		
28.0	4415.	6000.	-18.85	-8.88	-1.78	1.14		

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5657

DATE 09/16/77 TIME 05 55MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	U-COMP M/S	V-COMP M/S	WIND SPEED M/S	WIND DIR DEG
0.0	0.	1585.	-0.9	2.4	2.6	160.
0.5	76.	1661.	-1.5	4.1	4.3	160.
1.0	152.	1737.	-0.3	3.8	3.8	176.
1.5	229.	1814.	-0.1	2.5	2.5	177.
2.0	305.	1890.	-1.6	2.6	3.1	148.
2.5	381.	1966.	0.1	2.3	2.3	181.
3.0	457.	2042.	0.1	4.7	4.7	182.
3.5	533.	2118.	-1.4	6.6	6.7	168.
4.0	610.	2195.	-1.2	8.3	8.4	172.
4.5	686.	2271.	-0.2	9.6	9.6	179.
5.0	762.	2347.	1.0	8.3	8.4	187.
5.5	838.	2423.	3.1	8.2	8.8	201.
6.0	914.	2499.	3.5	7.8	8.5	204.
6.5	991.	2576.	3.7	8.1	8.9	204.
7.0	1067.	2652.	4.1	7.6	8.7	208.
7.5	1143.	2728.	4.7	7.3	8.7	213.
8.0	1219.	2804.	5.0	7.5	9.0	214.
8.5	1295.	2880.	5.4	7.0	8.8	218.
9.0	1372.	2957.	5.3	5.9	7.9	222.
9.5	1457.	3042.	5.9	8.5	10.3	215.
10.0	1540.	3125.	6.4	10.8	12.5	211.
10.5	1616.	3201.	6.0	11.1	12.6	208.
11.0	1692.	3277.	6.6	9.9	11.9	214.
11.5	1768.	3353.	7.6	11.3	13.6	214.
12.0	1847.	3432.	7.5	12.5	14.6	211.

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5653

DATE 09/18/77 TIME 05 59MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	TEMP DEG C	D/T STD	D/T 300M	D/T LAPSE	WS M/S	WD DEG
	SFC		2.93		0.0		2.1	180.
1.0	150	1735	4.82	1.89	3.72	6.65	3.8	193.
1.3	* 190	1775	5.77		2.79	5.72		
2.0	300	1885	5.58	0.77	-1.11	1.81	2.9	93.
2.7	415.	2000.	4.83	-0.56	0.93	3.86	3.9	75.
3.3	500	2085	5.54	0.52	0.56	3.49	5.5	70.
6.0	915.	2500.	3.69	-1.08	-1.86	1.06	1.3	102.
9.3	1415.	3000.	1.79	-2.66	-0.94	1.99	M	M
15.0	*2289	3874	-4.19		-0.96	1.97		
15.8	2415.	4000.	-3.51	-5.30	0.0	2.93		
16.3	*2480	4065	-3.21		-0.19	2.74		
22.3	3415.	5000.	-9.87	-6.36	-1.36	1.57		
28.4	4415.	6000.	-16.84	-6.97	-2.57	0.36		

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5653

DATE 09/18/77 TIME 05 59MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	U-COMP M/S	V-COMP M/S	WIND SPEED M/S	WIND DIR DEG
0.0	0.	1585.	-0.0	2.1	2.1	180.
0.5	76.	1661.	1.0	3.6	3.7	195.
1.0	152.	1737.	0.9	3.7	3.8	193.
1.5	229.	1814.	-0.7	0.9	1.1	140.
2.0	305.	1890.	-3.1	-0.0	3.1	90.
2.5	381.	1966.	-3.5	-0.7	3.5	79.
3.0	457.	2042.	-4.2	-1.5	4.4	70.
3.5	533.	2118.	-5.9	-2.1	6.2	71.
4.0	610.	2195.	-4.6	-1.4	4.8	72.
4.5	686.	2271.	-3.4	-0.2	3.4	87.
5.0	762.	2347.	-2.9	0.8	3.0	106.
5.5	838.	2423.	-2.6	1.2	2.9	115.
6.0	914.	2499.	-1.3	0.3	1.4	103.
6.5	991.	2576.	-0.4	-0.4	0.6	41.
7.0	1067.	2652.	-0.4	-1.2	1.3	17.
7.5	1143.	2728.	-0.8	-1.4	1.7	30.
8.0	1219.	2804.	-0.8	-1.9	2.1	23.
8.5	1295.	2880.	-0.8	-1.9	2.1	21.
9.0	1372.	2957.	-0.8	-0.5	1.0	57.

UTAH U1UR

ELEV 1585 METERS

SOUNDING ID 5655

DATE 09/18/77 TIME 13 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	TEMP DEG C	D/T STD	D/T 300M	D/T LAPSE	WS M/S	WD DEG
	SFC		18.61		0.0		3.1	330.
0.9	150	1735	16.64	-1.97	-3.19	-0.26	1.4	275.
1.8	300	1885	15.31	-1.33	-0.89	2.04	2.3	292.
2.6	415.	2000.	14.74	-0.45	-2.50	0.43	2.9	310.
3.1	500	2085	14.39	-0.47	-1.07	1.86	2.4	306.
5.9	915.	2500.	12.09	-2.29	-0.90	2.02	3.4	254.
9.1	1415.	3000.	9.60	-2.31	-0.55	2.38	5.7	176.
15.6	2415.	4000.	3.50	-6.28	0.37	3.30		
22.1	3415.	5000.	-1.57	-5.07	-4.37	-1.44		
28.4	4415.	6000.	-6.72	-5.16	-2.70	0.23		

UTAH U1UB

ELEV 1585 METERS

SOUNDING ID 5655

DATE 09/18/77 TIME 13 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	U-COMP M/S	V-COMP M/S	WIND SPEED M/S	WIND DIR DEG
0.0	0.	1585.	1.5	-2.7	3.1	330.
0.5	76.	1661.	0.7	-0.6	0.9	311.
1.0	170.	1755.	1.6	0.2	1.6	264.
1.5	249.	1834.	1.3	-0.1	1.3	276.
2.0	325.	1910.	2.4	-1.4	2.7	300.
2.5	401.	1986.	2.2	-1.9	2.9	310.
3.0	478.	2063.	2.1	-1.7	2.8	309.
3.5	554.	2139.	1.5	-0.8	1.7	298.
4.0	630.	2215.	2.1	-1.1	2.3	297.
4.5	706.	2291.	2.6	-1.2	2.8	294.
5.0	782.	2367.	2.3	-0.8	2.5	289.
5.5	860.	2445.	2.2	0.2	2.2	265.
6.0	936.	2521.	3.6	1.3	3.9	250.
6.5	1012.	2597.	4.0	3.0	5.0	234.
7.0	1089.	2674.	3.7	3.8	5.3	224.
7.5	1165.	2750.	2.5	3.9	4.7	213.
8.0	1241.	2826.	1.3	4.4	4.5	197.
8.5	1317.	2902.	0.7	5.2	5.3	187.
9.0	1393.	2978.	-0.4	5.4	5.5	175.
9.5	1470.	3055.	-0.3	6.2	6.2	177.
10.0	1546.	3131.	-0.3	6.6	6.6	177.
10.5	1622.	3207.	0.9	7.1	7.1	188.
11.0	1698.	3283.	2.4	7.7	8.0	197.
11.5	1774.	3359.	2.3	8.1	8.4	196.
12.0	1851.	3436.	2.8	8.0	8.5	200.

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5670

DATE 09/20/77 TIME 06 01MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	TEMP DEG C	D/T STD	D/T 300M	D/T LAPSE	WS M/S	WD DEG
	SFC		3.31		0.0		1.0	160.
1.0	150	1735	8.48	5.17	6.60	9.53	1.0	150.
2.0	300	1885	10.71	2.23	2.18	5.11	3.9	176.
2.7	415.	2000.	11.36	0.92	-0.36	2.57	3.7	210.
3.3	500	2085	11.18	-0.45	-0.91	2.02	3.8	227.
6.0	915.	2500.	9.14	-1.95	-1.46	1.46	5.9	233.
9.3	1415.	3000.	5.58	-3.65	-1.48	1.44	7.7	219.
15.8	2415.	4000.	-1.85	-7.44	-2.66	0.27		
22.4	3415.	5000.	-9.67	-7.82	-2.14	0.79		
28.9	4415.	6000.	-13.04	-3.37	-1.37	1.56		

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5670

DATE 09/20/77 TIME 06 01MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	U-COMP M/S	V-COMP M/S	WIND SPEED M/S	WIND DIR DEG
0.0	0.	1585.	-0.4	1.0	1.0	160.
0.5	76.	1661.	-1.3	1.9	2.3	145.
1.0	152.	1737.	-0.5	0.8	1.0	150.
1.5	229.	1814.	-1.3	1.8	2.2	145.
2.0	305.	1890.	-0.1	4.1	4.1	178.
2.5	381.	1966.	1.1	3.4	3.6	198.
3.0	457.	2042.	2.8	2.8	3.9	225.
3.5	533.	2118.	2.8	2.4	3.7	229.
4.0	610.	2195.	3.2	2.4	4.0	233.
4.5	686.	2271.	3.7	2.4	4.4	238.
5.0	762.	2347.	4.8	2.8	5.6	239.
5.5	838.	2423.	4.5	3.2	5.5	234.
6.0	914.	2499.	4.7	3.5	5.9	233.
6.5	991.	2576.	4.6	3.9	6.0	230.
7.0	1067.	2652.	4.2	4.3	6.0	224.
7.5	1143.	2728.	4.4	3.9	5.9	229.
8.0	1219.	2804.	4.2	4.6	6.2	223.
8.5	1295.	2880.	4.3	4.8	6.4	222.
9.0	1373.	2958.	4.6	5.1	6.9	222.
9.5	1450.	3035.	4.9	6.7	8.3	216.
10.0	1526.	3111.	5.4	8.3	9.9	213.
10.5	1602.	3187.	4.8	8.4	9.7	210.
11.0	1678.	3263.	5.8	9.4	11.0	212.
11.5	1754.	3339.	5.7	9.3	10.9	211.
12.0	1831.	3416.	5.5	9.0	10.6	211.

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5668

DATE 09/22/77 TIME 06 03MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	TEMP DEG C	D/T STD	D/T 300M	D/T LAPSE	WS M/S	WD DEG
	SFC		6.62		0.0		1.0	180.
1.0	150	1735	8.11	1.50	3.67	6.59	1.6	178.
2.0	300	1885	10.25	2.14	3.28	6.20	2.0	294.
2.7	415.	2000.	11.17	1.02	-0.54	2.38	1.8	341.
3.3	500	2085	10.90	-0.36	-0.91	2.02	1.5	164.
6.0	915.	2500.	9.14	-1.11	-2.56	0.37	2.7	140.
9.3	1415.	3000.	6.34	-3.45	-2.22	0.71	11.7	179.
15.8	2415.	4000.	-0.32	-6.66	-2.46	0.47		
22.3	3415.	5000.	-9.08	-8.76	-2.52	0.41		
28.4	4415.	6000.	-17.34	-8.26	-2.77	0.16		

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5668

DATE 09/22/77 TIME 06 03MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	U-COMP M/S	V-COMP M/S	WIND SPEED M/S	WIND DIR DEG
0.0	0.	1585.	-0.0	1.0	1.0	180.
0.5	76.	1661.	-0.3	1.6	1.6	170.
1.0	152.	1737.	-0.1	1.6	1.6	178.
1.5	229.	1814.	0.4	0.9	1.0	205.
2.0	305.	1890.	1.8	-1.0	2.1	300.
2.5	381.	1966.	0.9	-1.5	1.8	330.
3.0	457.	2042.	0.2	-1.7	1.7	354.
3.5	533.	2118.	-0.3	-1.2	1.3	15.
4.0	610.	2195.	-0.0	-0.7	0.7	3.
4.5	686.	2271.	-0.5	-1.0	1.1	28.
5.0	762.	2347.	-1.3	0.6	1.5	116.
5.5	838.	2423.	-1.2	2.5	2.8	154.
6.0	914.	2499.	-1.8	2.1	2.7	140.
6.5	991.	2576.	-1.1	2.9	3.1	160.
7.0	1067.	2652.	-0.8	4.0	4.1	169.
7.5	1143.	2728.	-1.4	5.7	5.9	166.
8.0	1219.	2804.	-1.9	8.5	8.7	168.
8.5	1295.	2880.	-1.5	10.4	10.5	172.
9.0	1372.	2957.	-0.8	11.5	11.6	176.
9.5	1448.	3033.	0.2	11.8	11.8	181.
10.0	1524.	3109.	1.3	13.1	13.2	186.
10.5	1600.	3185.	2.5	14.2	14.4	190.
11.0	1676.	3261.	4.0	14.7	15.3	195.
11.5	1753.	3338.	3.8	16.5	16.9	193.
12.0	1829.	3414.	5.3	16.6	17.4	198.

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5666

DATE 09/22/77 TIME 13 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	TEMP DEG C	D/T STD	D/T 300M	D/T LAPSE	WS M/S	WD DEG
	SFC		17.71		0.0		6.2	360.
1.0	150	1735	16.55	-1.17	-1.77	1.16	7.5	339.
2.0	300	1885	15.29	-1.26	-2.32	0.61	8.0	339.
2.7	415.	2000.	14.10	-0.91	-1.97	0.96	8.1	346.
3.3	500	2085	13.76	-0.62	-1.61	1.31	7.3	335.
6.0	915.	2500.	11.17	-2.49	-1.27	1.66	4.3	299.
9.1	1415.	3000.	8.49	-2.88	1.28	4.21	7.0	230.
15.2	2415.	4000.	1.31	-7.07	-4.33	-1.40		
19.0	3415.	5000.	-9.37	-10.68	-6.02	-3.09		
23.9	4415.	6000.	-15.54	-6.17	-1.77	1.16		

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5666

DATE 09/22/77 TIME 13 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	U-COMP M/S	V-COMP M/S	WIND SPEED M/S	WIND DIR DEG
0.0	0.	1585.	0.0	-6.2	6.2	360.
0.5	76.	1661.	2.1	-5.6	6.0	339.
1.0	152.	1737.	2.7	-7.1	7.6	339.
1.5	229.	1814.	2.9	-7.1	7.7	338.
2.0	305.	1890.	2.8	-7.5	8.0	339.
2.5	381.	1966.	2.0	-7.7	8.0	345.
3.0	457.	2042.	2.0	-8.0	8.2	346.
3.5	533.	2118.	3.6	-5.5	6.5	327.
4.0	610.	2195.	4.2	-4.9	6.4	319.
4.5	686.	2271.	3.9	-3.1	5.0	309.
5.0	762.	2347.	2.9	-1.6	3.3	299.
5.5	838.	2423.	2.6	-0.5	2.6	281.
6.0	914.	2499.	3.8	-2.1	4.3	299.
6.5	991.	2576.	3.3	-1.6	3.6	295.
7.0	1067.	2652.	3.2	-0.4	3.2	278.
7.5	1157.	2742.	4.2	-0.5	4.3	276.
8.0	1245.	2830.	5.5	-0.5	5.5	275.
8.5	1321.	2906.	4.5	0.6	4.5	263.
9.0	1398.	2983.	5.3	3.9	6.6	233.
9.5	1474.	3059.	5.2	6.5	8.3	219.
10.0	1550.	3135.	5.8	8.9	10.6	213.
10.5	1626.	3211.	5.3	9.6	11.0	209.
11.0	1702.	3287.	3.6	13.2	13.7	195.
11.5	1779.	3364.	3.3	13.6	14.0	194.
12.0	1855.	3440.	3.6	14.5	14.9	194.



UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5676

DATE 09/24/77 TIME 06 05MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	TEMP DEG C	D/T STD	D/T 300M	D/T LAPSE	WS M/S	WD DEG
	SFC		-1.67		0.0		1.5	160.
1.0	150	1735	2.54	4.21	6.56	9.49	1.0	122.
2.0	300	1885	6.48	3.93	6.11	9.04	1.4	75.
2.7	415.	2000.	7.55	0.98	0.92	3.85	2.7	204.
3.3	500	2085	7.73	0.28	0.74	3.66	5.4	192.
4.0	* 609	2194	7.93		0.0	2.93		
6.0	915.	2500.	6.71	-1.02	-1.11	1.82	11.5	199.
9.3	1415.	3000.	4.64	-2.08	-0.74	2.18	18.0	211.
15.8	2415.	4000.	-3.02	-7.66	-1.53	1.40		
22.3	3415.	5000.	-9.08	-6.06	-2.91	0.02		
28.7	4415.	6000.	-16.34	-7.26	-2.17	0.76		

UTAH UAUR

ELEV 1585 METERS

SOUNDING ID 5676

DATE 09/24/77 TIME 06 05MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	U-COMP M/S	V-COMP M/S	WIND SPEED M/S	WIND DIR DEG
0.0	0.	1585.	-0.5	1.5	1.5	160.
0.5	76.	1661.	-0.4	1.1	1.2	162.
1.0	152.	1737.	-0.8	0.5	1.0	120.
1.5	229.	1814.	-0.9	0.5	1.1	120.
2.0	305.	1890.	-1.3	-0.4	1.4	72.
2.5	381.	1966.	0.4	0.9	1.0	207.
3.0	457.	2042.	1.7	4.5	4.8	200.
3.5	533.	2118.	0.6	6.0	6.0	186.
4.0	610.	2195.	0.0	7.0	7.0	180.
4.5	686.	2271.	1.0	9.4	9.5	186.
5.0	762.	2347.	2.1	9.7	10.0	192.
5.5	838.	2423.	2.3	9.2	9.5	194.
6.0	914.	2499.	3.8	10.9	11.5	199.
6.5	991.	2576.	4.5	11.1	11.9	202.
7.0	1067.	2652.	5.3	11.1	12.3	206.
7.5	1143.	2728.	5.7	10.9	12.3	208.
8.0	1219.	2804.	6.7	12.1	13.8	209.
8.5	1295.	2880.	7.8	14.3	16.3	209.
9.0	1372.	2957.	8.7	14.8	17.2	210.
9.5	1448.	3033.	9.8	15.9	18.7	212.
10.0	1524.	3109.	10.6	15.7	18.9	214.
10.5	1600.	3185.	10.6	15.1	18.4	215.
11.0	1681.	3266.	9.9	14.5	17.6	215.
11.5	1757.	3342.	11.0	14.6	18.3	217.
12.0	1833.	3418.	10.1	12.3	15.9	219.

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5667

DATE 09/24/77 TIME 13 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	TEMP DEG C	D/T STD	D/T 300 M	D/T LAPSE	WS M/S	WD DEG
	SFC		19.76		0.0		3.1	225.
1.0	150	1735	18.26	-1.51	-2.98	-0.05	2.8	232.
2.0	300	1885	17.54	-0.72	-1.23	1.69	5.7	231.
2.7	415.	2000.	16.82	-0.54	-1.77	1.16	7.5	235.
3.3	500	2085	16.20	-0.79	-2.48	0.44	9.3	236.
6.0	915.	2500.	12.09	-3.17	-4.51	-1.58	12.0	230.
8.9	1415.	3000.	9.51	-3.52	-2.56	0.37	19.0	229.
15.4	2415.	4000.	3.22	-6.29	-1.87	1.06		
20.8	*3269	4854	-3.99		1.33	4.26		
21.5	*3383	4968	-1.57		1.91	4.84		
21.7	3415.	5000.	-2.05	-5.27	-1.71	1.21		
27.9	4415.	6000.	-8.98	-6.93	-0.97	1.96		

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5667

DATE 09/24/77 TIME 13 50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	U-COMP M/S	V-COMP M/S	WIND SPEED M/S	WIND DIR DEG
0.0	0.	1585.	2.2	2.2	3.1	225.
0.5	76.	1661.	2.1	0.3	2.1	262.
1.0	152.	1737.	2.2	1.8	2.8	231.
1.5	229.	1814.	4.5	3.0	5.5	236.
2.0	305.	1890.	4.4	3.7	5.8	230.
2.5	381.	1966.	4.6	3.5	5.8	233.
3.0	457.	2042.	8.2	5.3	9.7	237.
3.5	533.	2118.	7.3	5.1	8.9	235.
4.0	610.	2195.	6.8	5.5	8.8	231.
4.5	686.	2271.	7.2	6.3	9.6	229.
5.0	762.	2347.	7.8	6.9	10.4	229.
5.5	838.	2423.	8.5	7.3	11.2	230.
6.0	914.	2499.	9.2	7.6	11.9	230.
6.5	1015.	2600.	11.1	9.3	14.5	230.
7.0	1123.	2708.	11.9	10.4	15.8	229.
7.5	1199.	2784.	11.3	10.2	15.2	228.
8.0	1275.	2860.	11.7	10.5	15.7	228.
8.5	1351.	2936.	13.7	12.3	18.5	228.
9.0	1428.	3013.	14.4	12.7	19.2	229.
9.5	1504.	3089.	15.9	14.1	21.2	228.
10.0	1580.	3165.	18.1	15.1	23.6	230.
10.5	1656.	3241.	16.6	14.4	21.9	229.
11.0	1732.	3317.	16.7	13.3	21.3	231.
11.5	1809.	3394.	15.2	13.3	20.2	229.
12.0	1885.	3470.	14.4	11.3	18.3	232.

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5671

DATE 09/26/77 TIME 06 06MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	TEMP DEG C	D/T STD	D/T 300M	D/T LAPSE	WS M/S	WD DEG
	SFC		17.18		0.0		2.6	180.
0.8	* 114	1699	18.34		0.88	3.81		
1.0	150	1735	18.25	1.08	-1.41	1.52	7.0	203.
2.0	300	1885	16.83	-1.43	-1.77	1.16	9.6	199.
2.7	415.	2000.	16.19	-0.37	-2.13	0.80	14.7	197.
3.3	500	2085	15.57	-0.89	-2.31	0.62	16.9	197.
6.0	915.	2500.	12.28	-3.29	-1.44	1.49	17.4	196.
9.3	1415.	3000.	8.77	-3.50	-2.93	-0.00	17.6	217.
15.3	2415.	4000.	-1.27	-10.05	-3.60	-0.67		
20.9	3415.	5000.	-10.36	-9.10	-3.31	-0.38		
27.1	4415.	6000.	-18.65	-8.29	-3.17	-0.25		

UTAH UAUB

ELEV 1585 METERS

SOUNDING ID 5671

DATE 09/26/77 TIME 06 06MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	U-COMP M/S	V-COMP M/S	WIND SPEED M/S	WIND DIR DEG
0.0	0.	1585.	-0.0	2.6	2.6	180.
0.5	76.	1661.	1.3	3.8	4.0	199.
1.0	152.	1737.	2.8	6.6	7.1	203.
1.5	229.	1814.	3.5	8.2	9.0	203.
2.0	305.	1890.	3.2	9.1	9.6	199.
2.5	381.	1966.	4.0	13.2	13.8	197.
3.0	457.	2042.	4.6	15.3	15.9	197.
3.5	533.	2118.	5.1	16.9	17.7	197.
4.0	610.	2195.	3.8	16.6	17.0	193.
4.5	686.	2271.	3.4	15.1	15.5	193.
5.0	763.	2348.	3.0	15.3	15.6	191.
5.5	839.	2424.	4.4	17.0	17.6	195.
6.0	915.	2500.	4.8	16.7	17.4	196.
6.5	991.	2576.	7.3	18.8	20.2	201.
7.0	1067.	2652.	8.9	20.0	21.9	204.
7.5	1144.	2729.	9.3	16.9	19.3	209.
8.0	1220.	2805.	11.4	19.6	22.7	210.
8.5	1296.	2881.	11.3	18.1	21.3	212.
9.0	1372.	2957.	11.1	15.7	19.2	215.
9.5	1448.	3033.	10.1	12.9	16.3	218.
10.0	1538.	3123.	10.6	15.5	18.8	214.
10.5	1619.	3204.	9.8	14.1	17.2	215.
11.0	1709.	3294.	10.7	15.3	18.7	215.
11.5	1803.	3388.	13.2	19.8	23.8	214.
12.0	1881.	3466.	11.2	12.7	16.9	221.

UTAH UAUB

ELEV 1676 METERS

SOUNDING ID 5665

DATE 09/28/77 TIME 14 00MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	TEMP DEG C	D/T STD	D/T 300M	D/T LAPSE	WS M/S	WD DEG
	SFC		21.52		0.0		2.6	45.
0.8	150	1826	19.56	-1.97	-4.37	-1.44	M	M
1.5	300	1976	17.98	-1.57	-4.21	-1.28	M	M
1.6	324.	2000.	17.74	-0.25	-2.64	0.29	M	M
2.6	500	2176	15.80	-1.94	-4.44	-1.51	M	M
4.2	824.	2500.	13.20	-2.60	-2.88	0.05	M	M
7.4	1324.	3000.	8.86	-4.33	-2.75	0.18	M	M
13.5	2324.	4000.	3.68	-5.18	2.99	5.92		
19.9	3324.	5000.	-2.25	-5.93	-1.71	1.21		
25.3	4324.	6000.	-9.87	-7.62	-2.91	0.01		

UTAH UAUB

ELEV 1676 METERS

SOUNDING ID 5665

DATE 09/28/77 TIME 14 00MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	U-COMP M/S	V-COMP M/S	WIND SPEED M/S	WIND DIR DEG
0.0	0.	1676.	-1.8	-1.8	2.6	45.



UTAH UAUB

FLEV 1676 METERS

SOUNDING ID 0

DATE 09/30/77 TIME 07 15MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	TEMP DEG C	D/T STD	D/T 300M	D/T LAPSE	WS M/S	WD DEG
	SFC		7.44		0.0		1.0	45.
0.8	* 114	1790	8.73		0.0	2.93		
1.0	150	1826	8.45	1.02	-0.91	2.02	6.7	148.
2.0	300	1976	7.72	-0.74	-3.09	-0.17	6.2	136.
2.1	324.	2000.	6.60	-0.44	-2.73	0.19	6.3	135.
3.3	500	2176	5.42	-1.85	-2.38	0.55	5.2	133.
5.3	824.	2500.	2.58	-2.80	-3.71	-0.78	3.9	136.
8.3	1324.	3000.	-1.98	-4.58	-2.63	0.29	8.7	105.
13.7	2324.	4000.	-11.10	-9.13	-3.87	-0.94		
18.8	3324.	5000.	-19.54	-8.44	-1.78	1.15		

UTAH UAUB

ELEV 1676 METERS

SOUNDING ID 0

DATE 09/30/77 TIME 07 15MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	U-COMP M/S	V-COMP M/S	WIND SPEED M/S	WIND DIR DEG
0.0	0.	1676.	-0.7	-0.7	1.0	45.
0.5	76.	1752.	-2.8	6.2	6.8	156.
1.0	152.	1828.	-3.5	5.6	6.6	148.
1.5	229.	1905.	-4.4	4.9	6.6	138.
2.0	305.	1981.	-4.3	4.5	6.2	136.
2.5	383.	2059.	-5.0	4.2	6.6	130.
3.0	460.	2136.	-4.0	3.5	5.4	131.
3.5	536.	2212.	-3.5	3.5	5.0	135.
4.0	612.	2288.	-3.4	3.5	4.9	136.
4.5	688.	2364.	-3.7	2.9	4.7	128.
5.0	764.	2440.	-3.5	3.5	5.0	135.
5.5	858.	2534.	-2.3	2.4	3.3	136.
6.0	957.	2633.	-0.5	-0.1	0.5	78.
6.5	1038.	2714.	-3.4	0.4	3.4	97.
7.0	1114.	2790.	-4.8	3.8	6.1	129.
7.5	1190.	2866.	-9.1	-0.1	9.1	89.
8.0	1271.	2947.	-8.3	0.0	8.3	90.
8.5	1357.	3033.	-8.2	3.6	8.9	114.
9.0	1433.	3109.	-10.0	1.4	10.1	98.
9.5	1510.	3186.	-10.5	1.6	10.6	99.
10.0	1588.	3264.	-11.6	1.4	11.7	97.
10.5	1670.	3346.	-12.5	-2.9	12.9	77.
11.0	1764.	3440.	-16.0	1.1	16.0	94.



UTAH UAUB

ELEV 1676 METERS

SOUNDING ID 5686

DATE 09/30/77 TIME 14 15MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	TEMP DEG C	D/T STD	D/T 300M	D/T LAPSE	WS M/S	WD DEG
	SFC		8.39		0.0		6.2	160.
1.0	150	1826	7.93	-0.46	-1.84	1.09	8.5	67.
2.0	300	1976	6.53	-1.40	-1.85	1.08	16.8	71.
2.1	324.	2000.	6.34	-0.09	-0.74	2.19	16.1	71.
3.3	500	2176	5.97	-0.47	-1.11	1.82	20.0	22.
5.4	824.	2500.	3.98	-1.99	-3.36	-0.43	29.4	59.
8.5	1324.	3000.	-0.61	-4.59	-3.79	-0.86	M	M
14.2	2324.	4000.	-8.39	-7.78	-3.29	-0.36		
19.7	3324.	5000.	-15.54	-7.15	-0.59	2.34		
26.0	4324.	6000.	-18.55	-3.01	-2.97	-0.04		

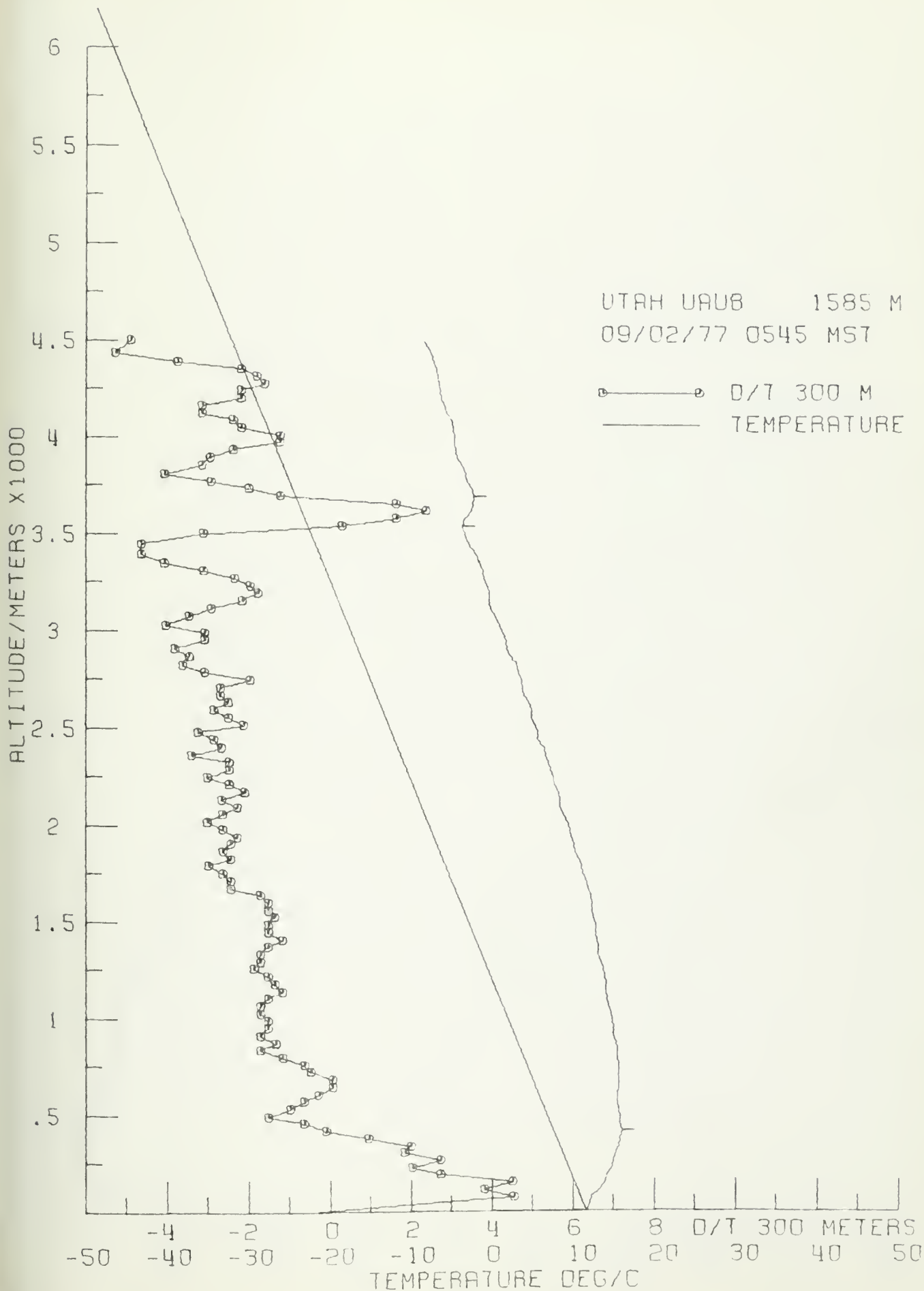
UTAH UAUB

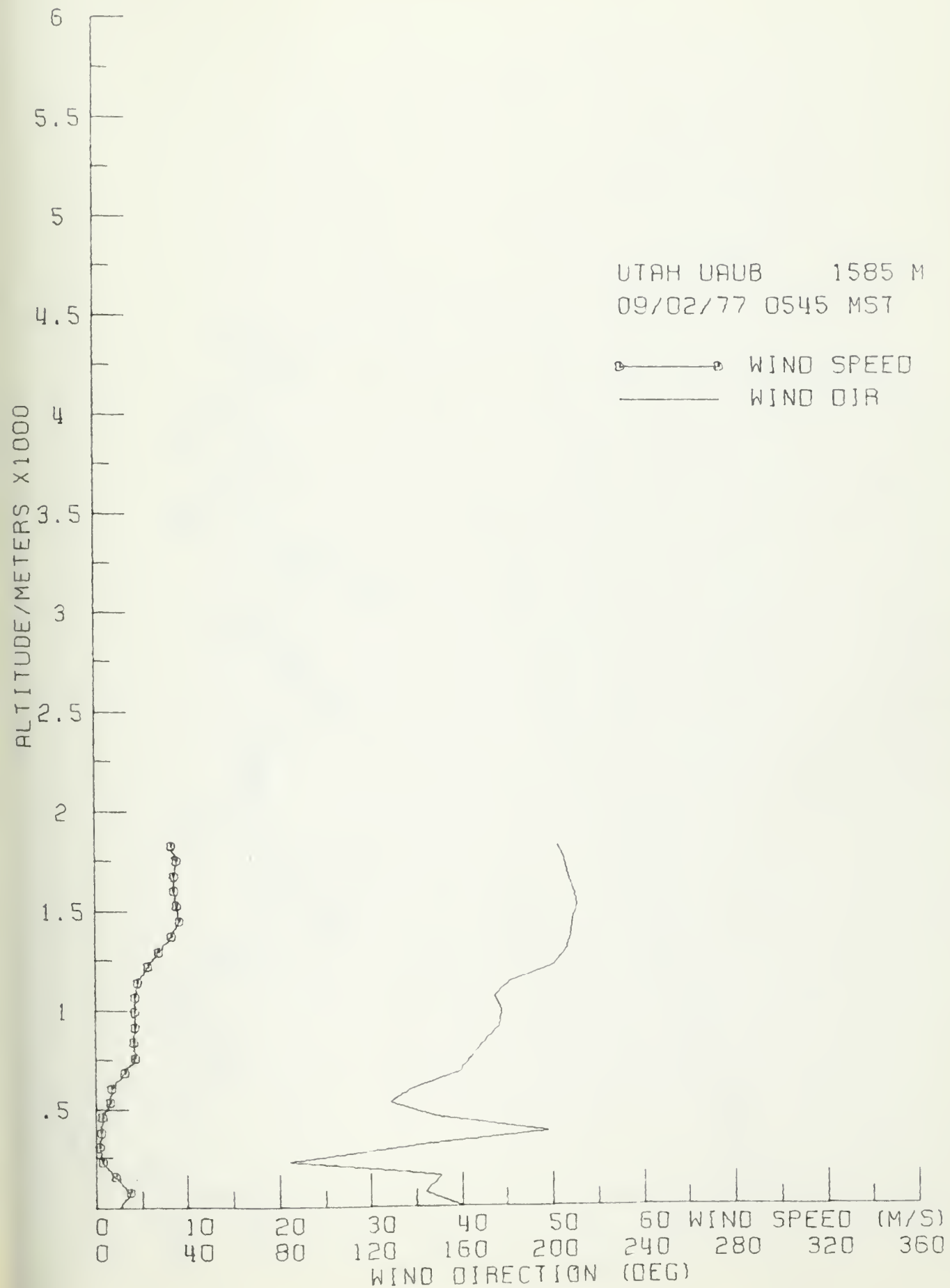
ELEV 1676 METERS

SOUNDING ID 5686

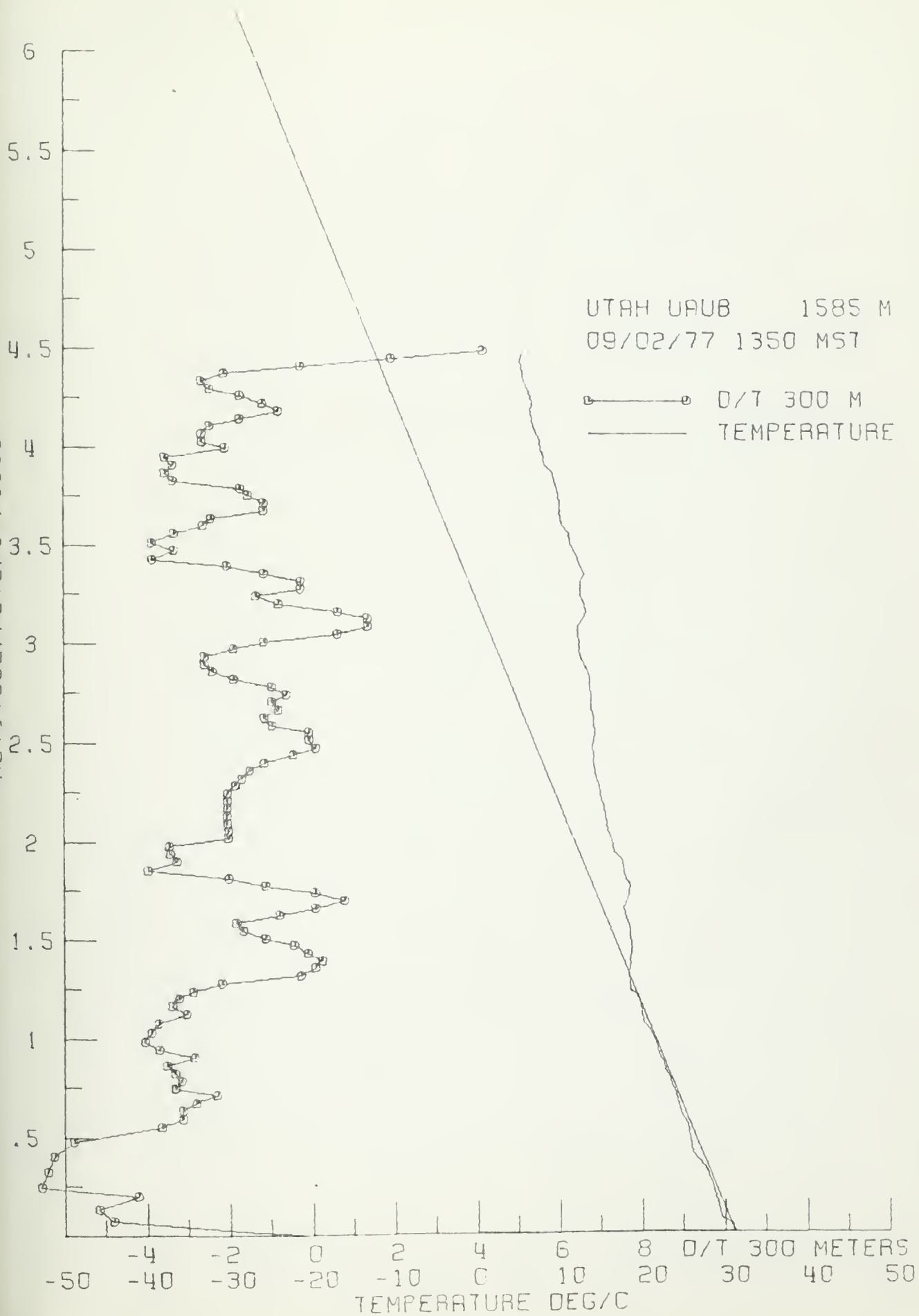
DATE 09/30/77 TIME 14 15MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

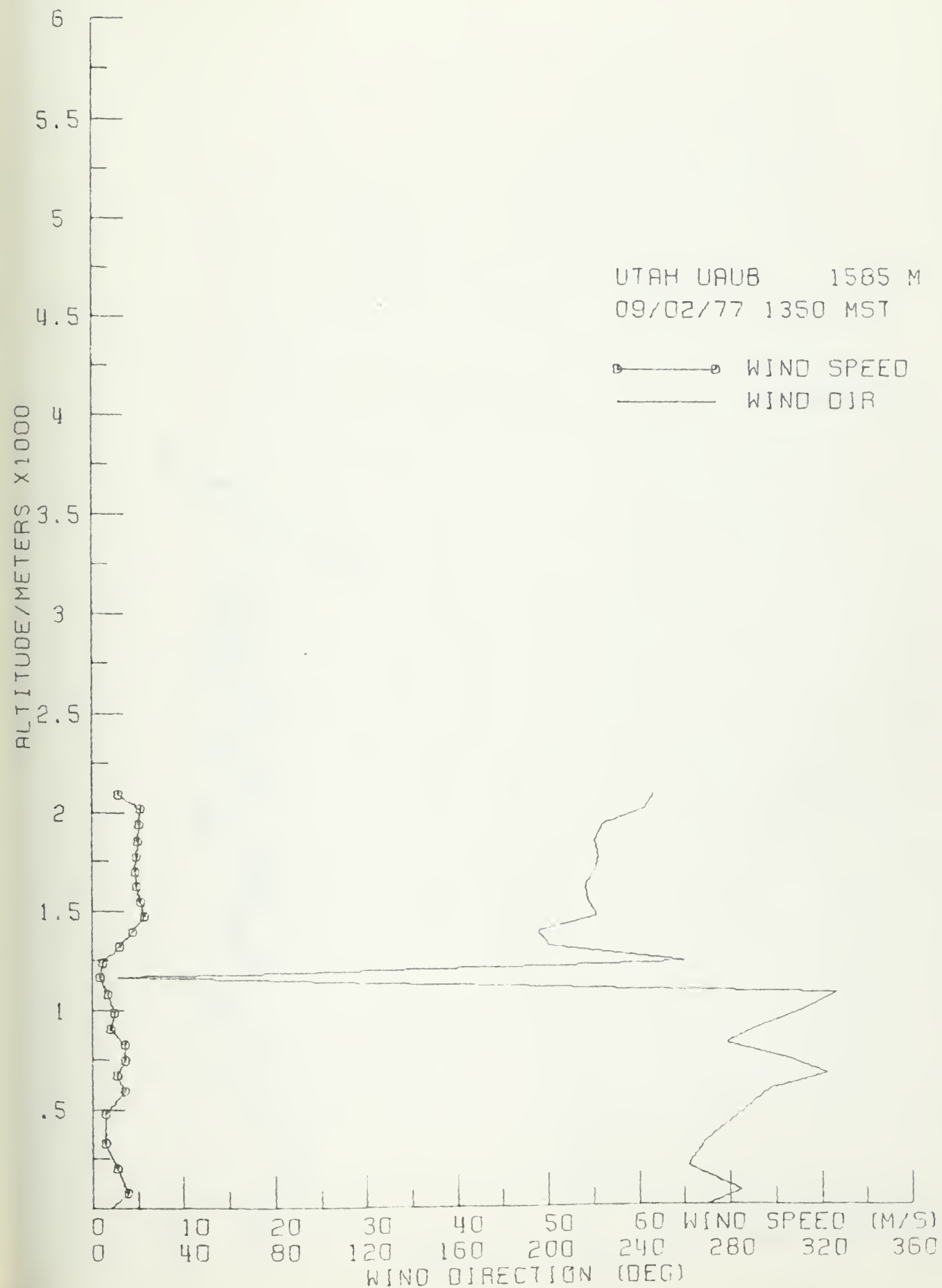
TIME MIN	HEIGHT M (AGL)	HEIGHT M (MSL)	U-COMP M/S	V-COMP M/S	WIND SPEED M/S	WIND DIR DEG
0.0	0.	1676.	-2.1	5.8	6.2	160.
0.5	76.	1752.	-5.9	-2.8	6.5	65.
1.0	152.	1828.	-7.9	-3.3	8.6	67.
1.5	229.	1905.	-11.1	-4.1	11.8	70.
2.0	305.	1981.	-16.1	-5.7	17.1	71.
2.5	381.	2057.	-12.6	-4.1	13.3	72.
3.0	457.	2133.	-8.5	-16.9	18.9	27.
3.5	533.	2209.	-6.4	-19.8	20.8	18.
4.0	610.	2286.	-14.8	-12.9	19.6	49.
4.5	686.	2362.	-19.2	-16.3	25.2	50.
5.0	762.	2438.	-23.8	-15.9	28.6	56.
5.5	838.	2514.	-25.5	-15.0	29.6	60.
6.0	921.	2597.	-24.3	-17.2	29.8	55.
6.5	1004.	2680.	-29.2	-16.1	33.3	61.



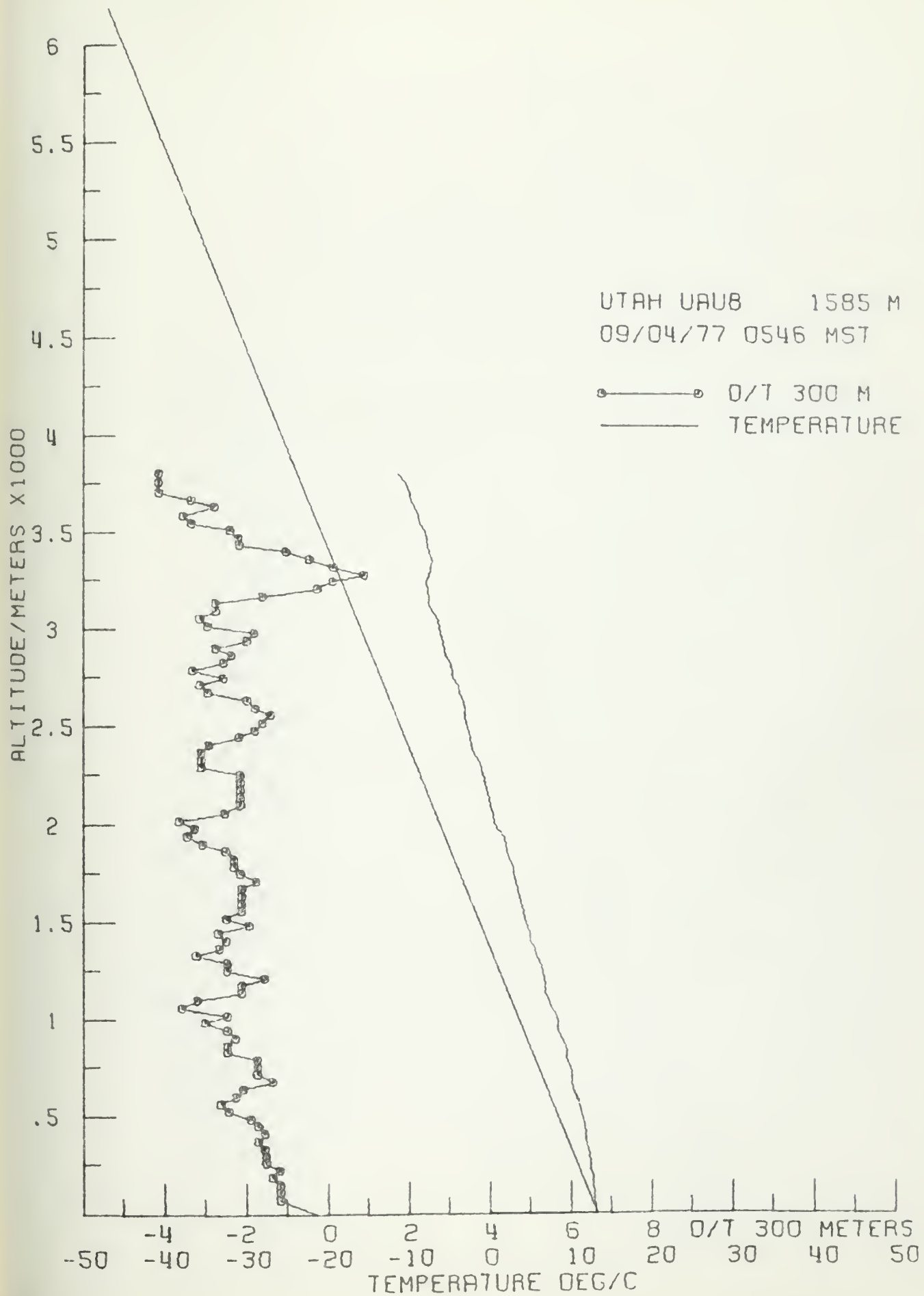


ALTITUDE/METERS X1000

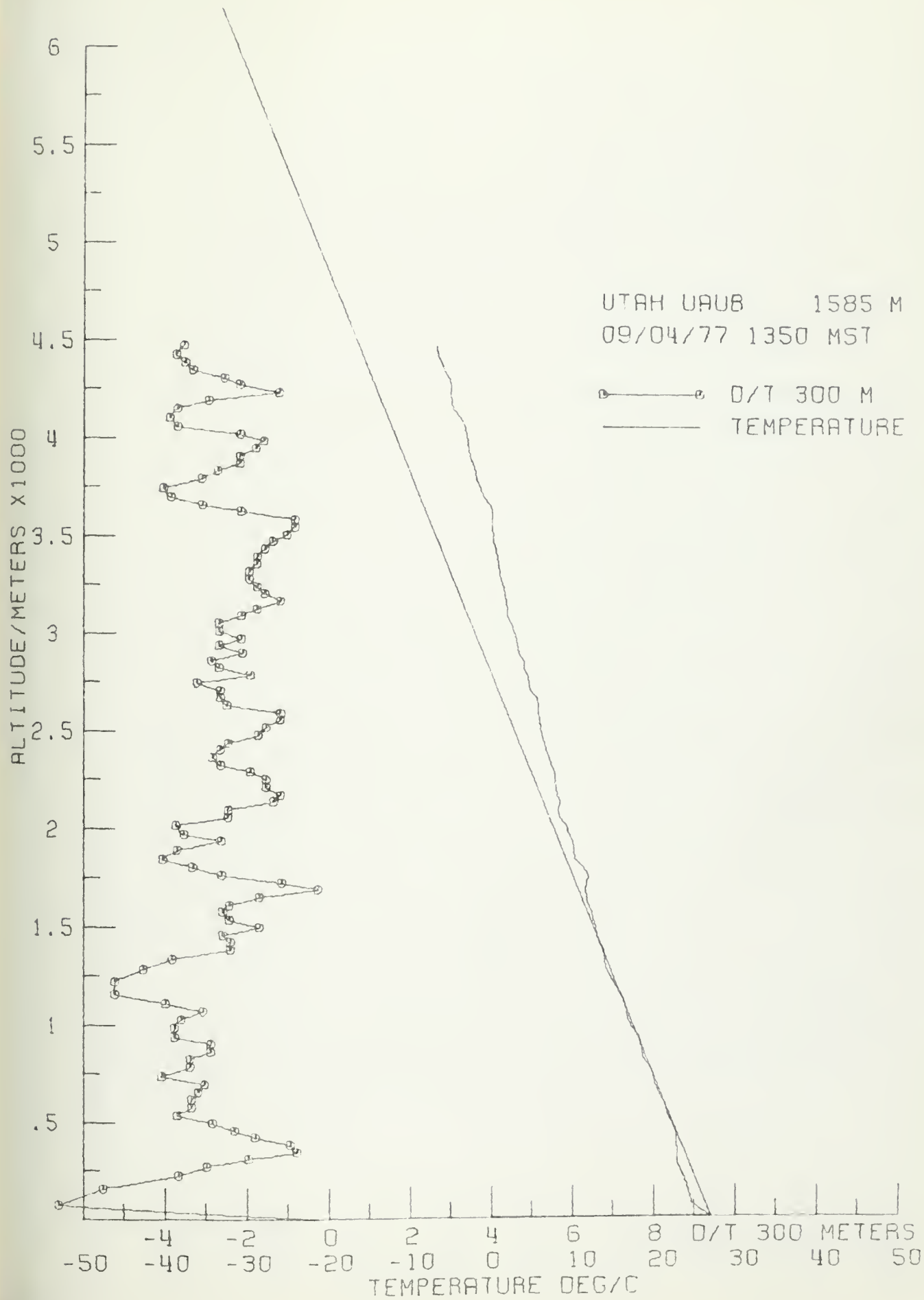




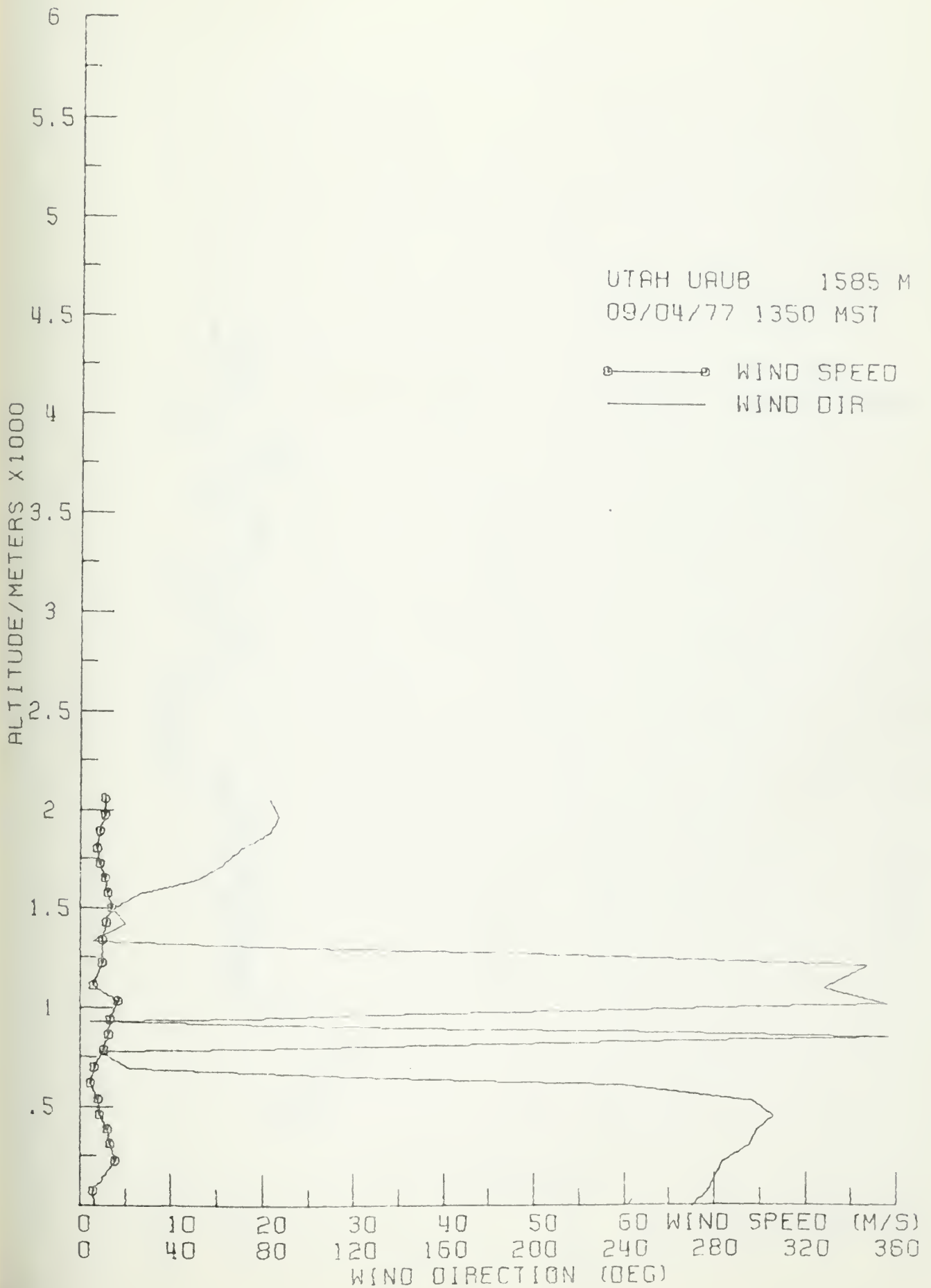




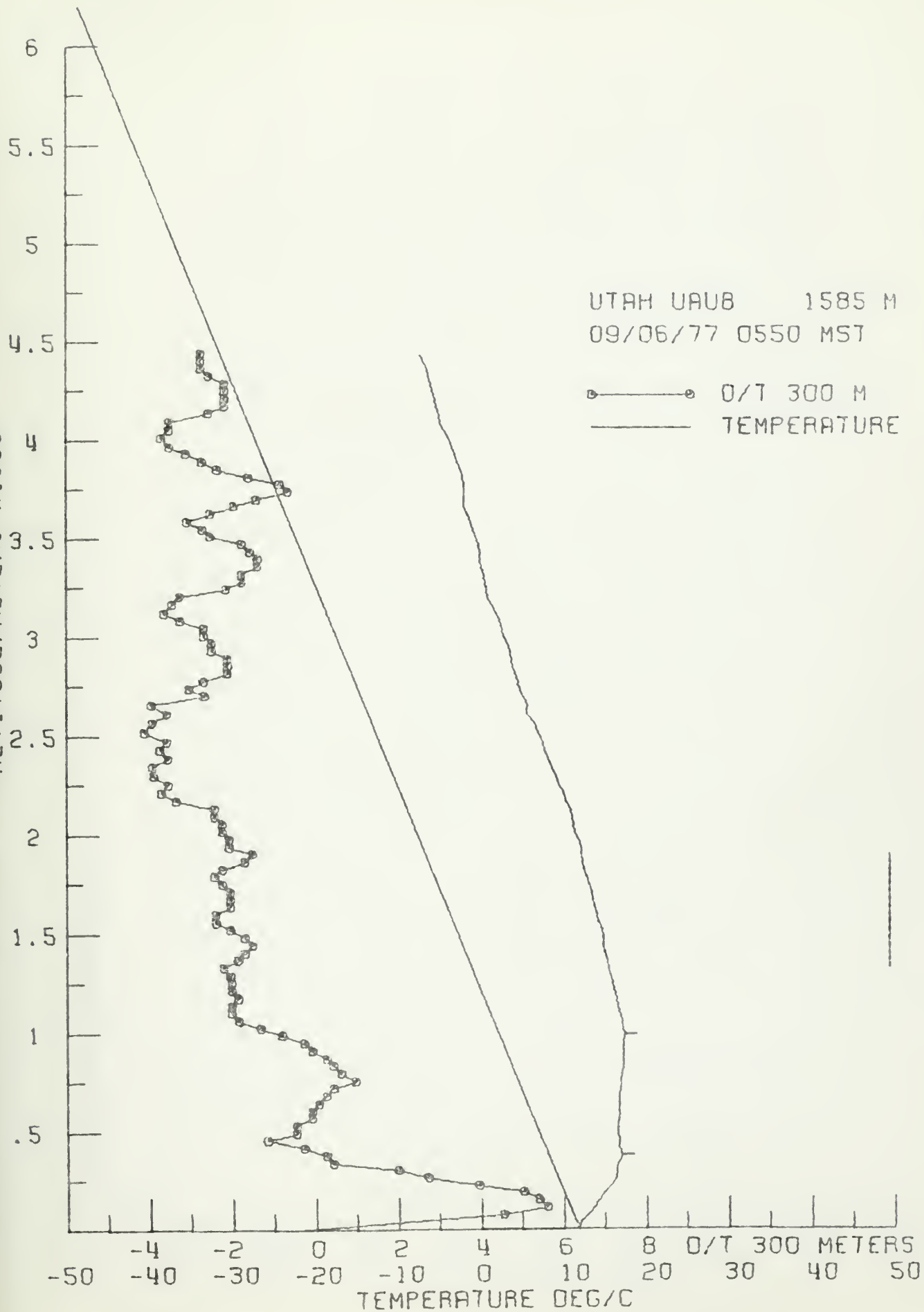


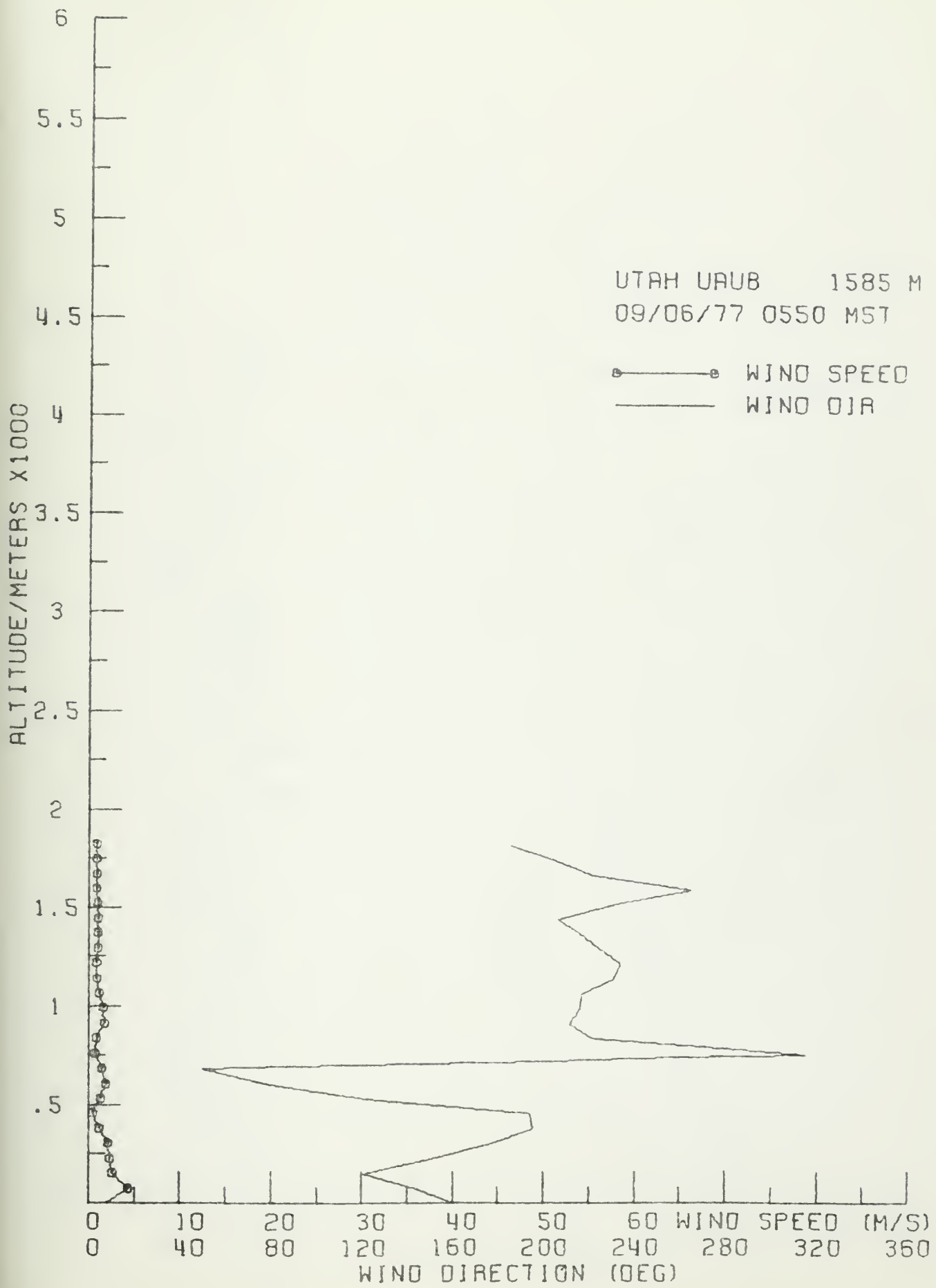




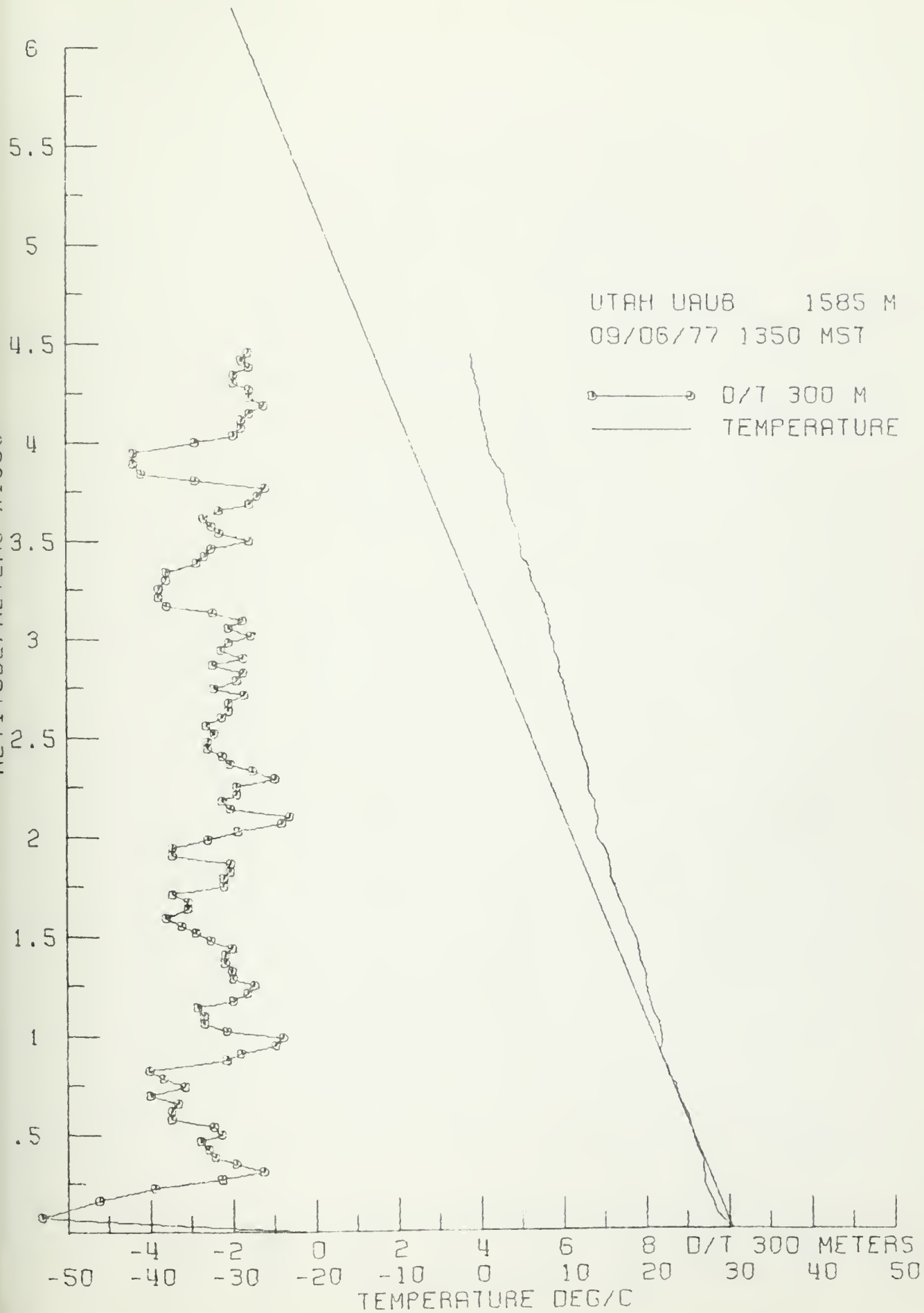


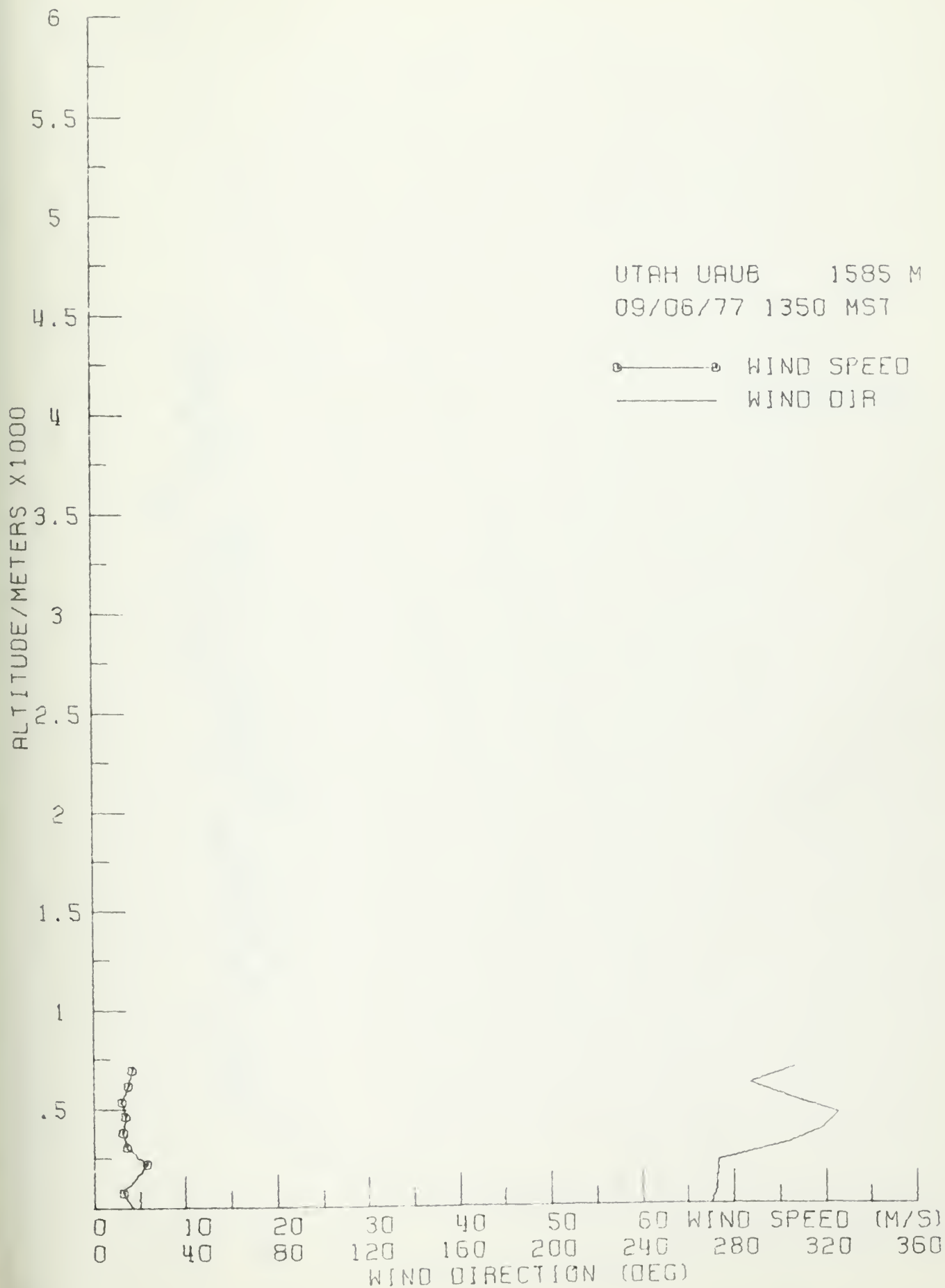
ALTITUDE/METERS X1000



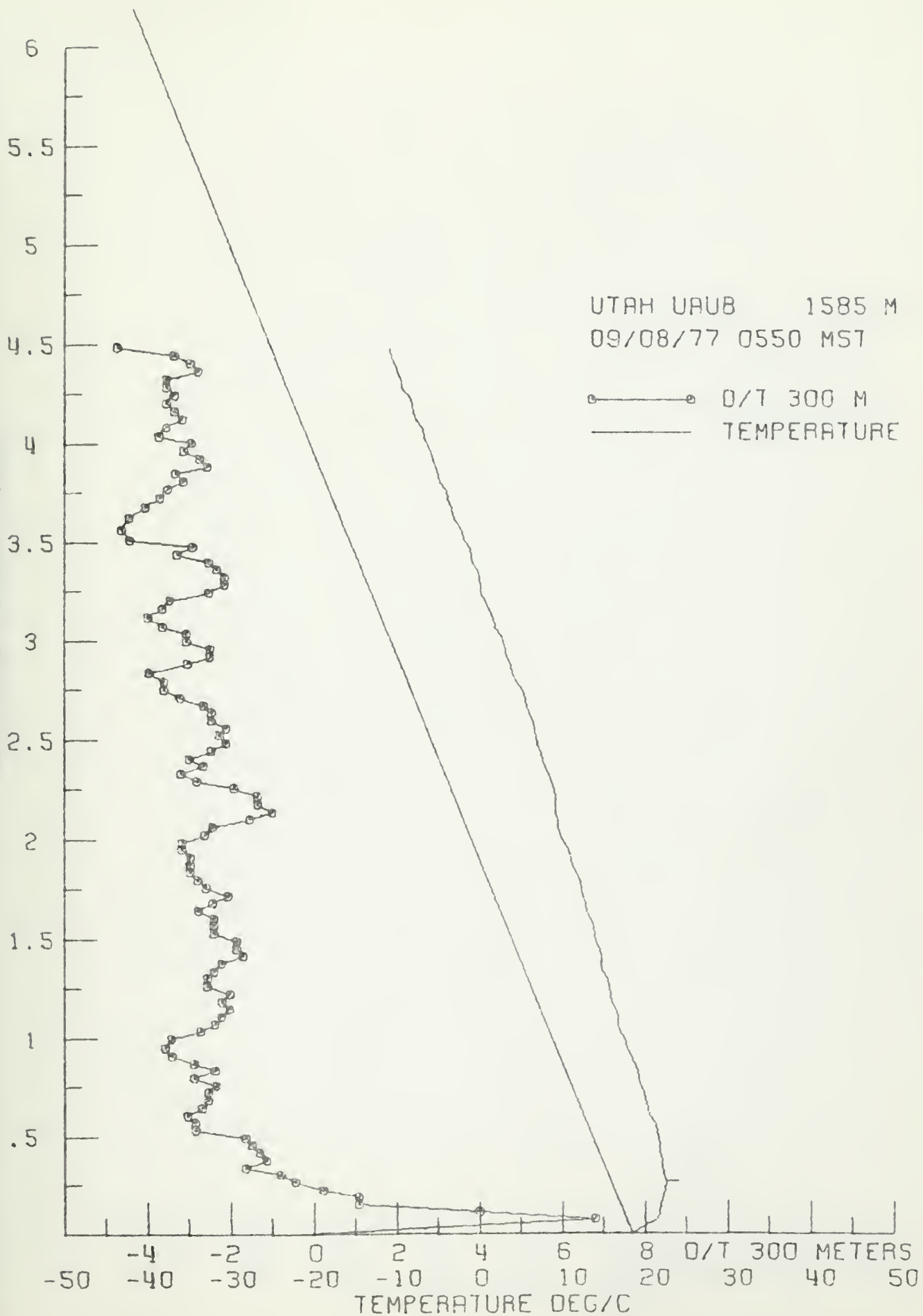


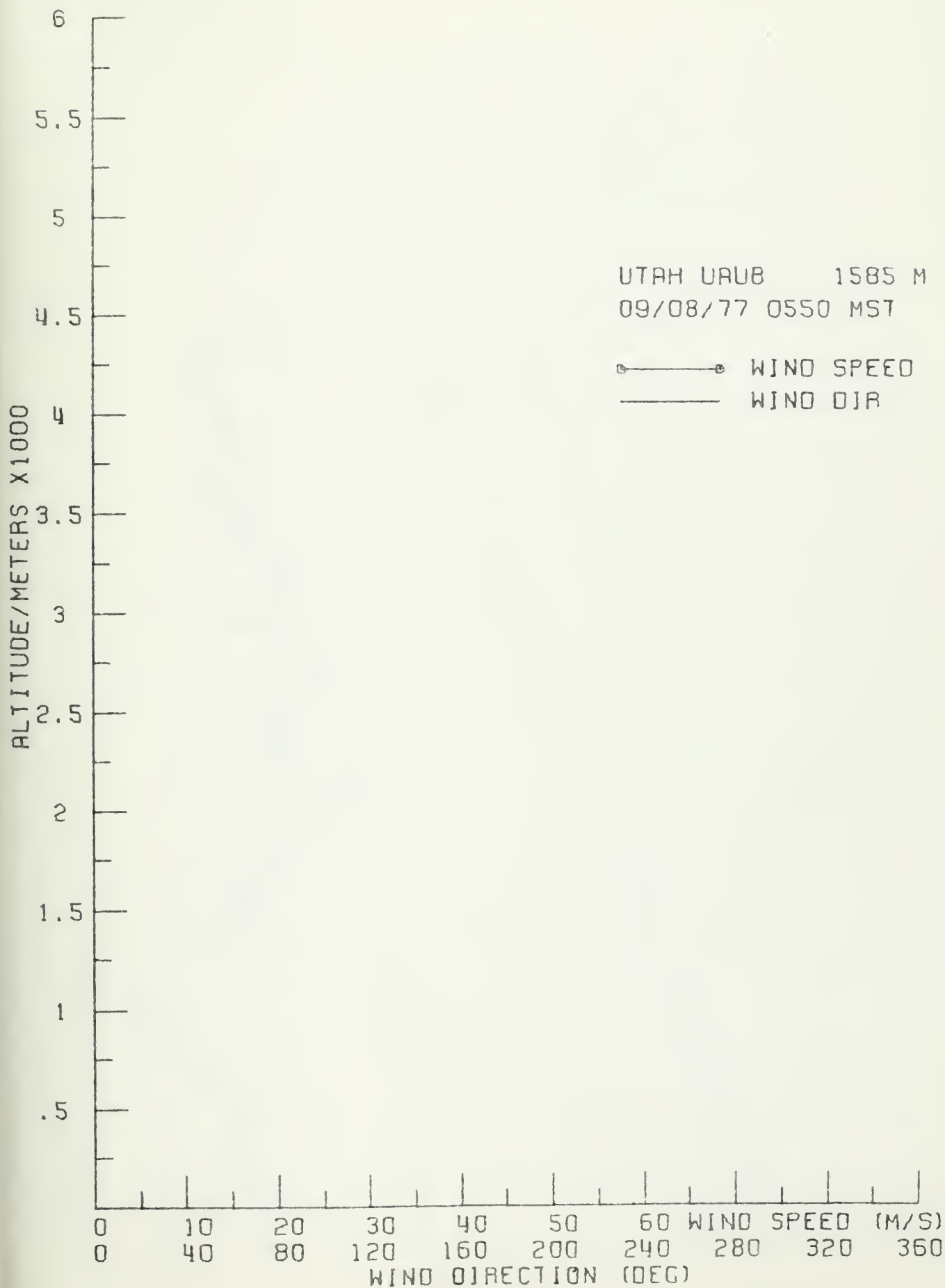
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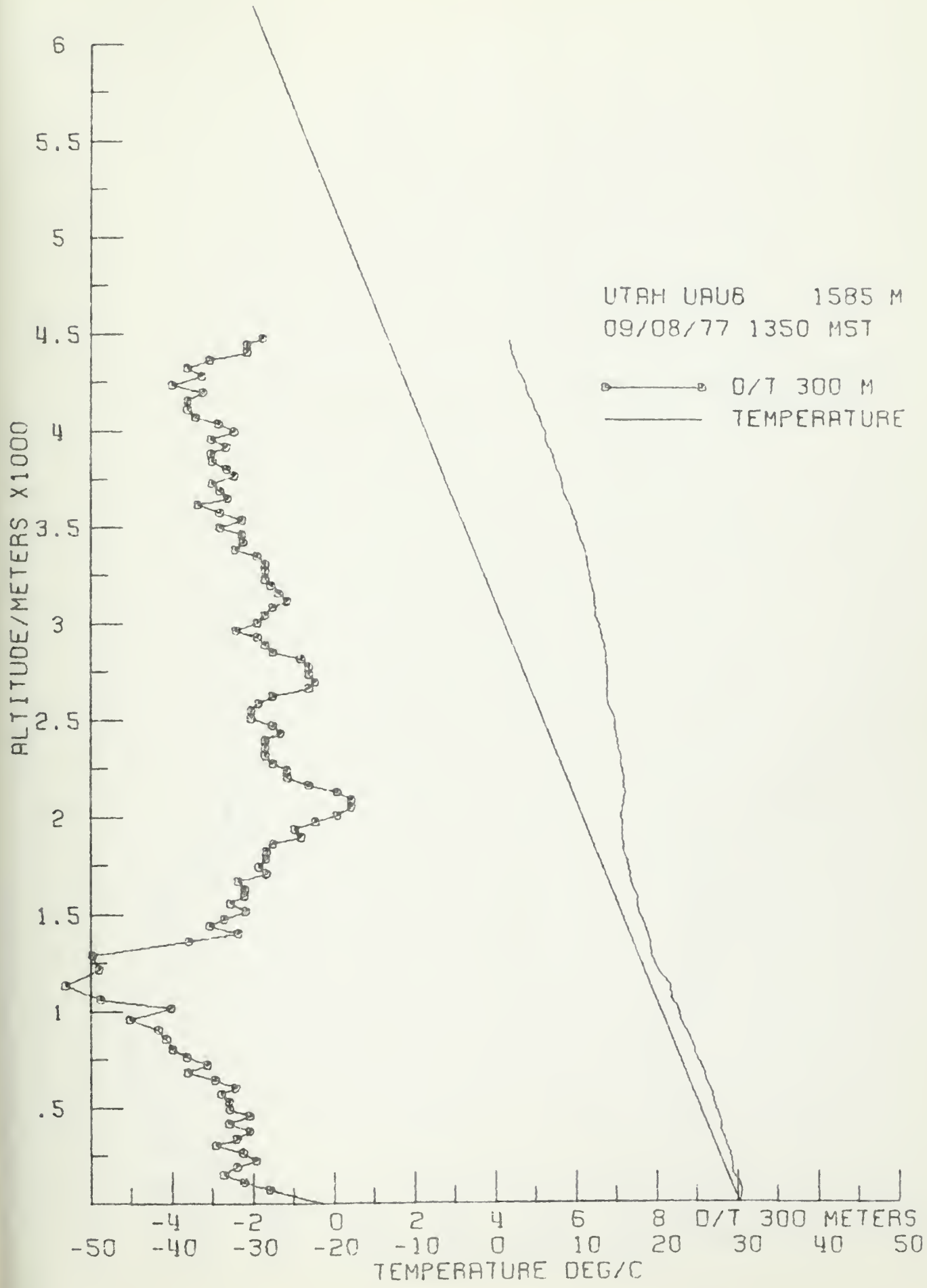


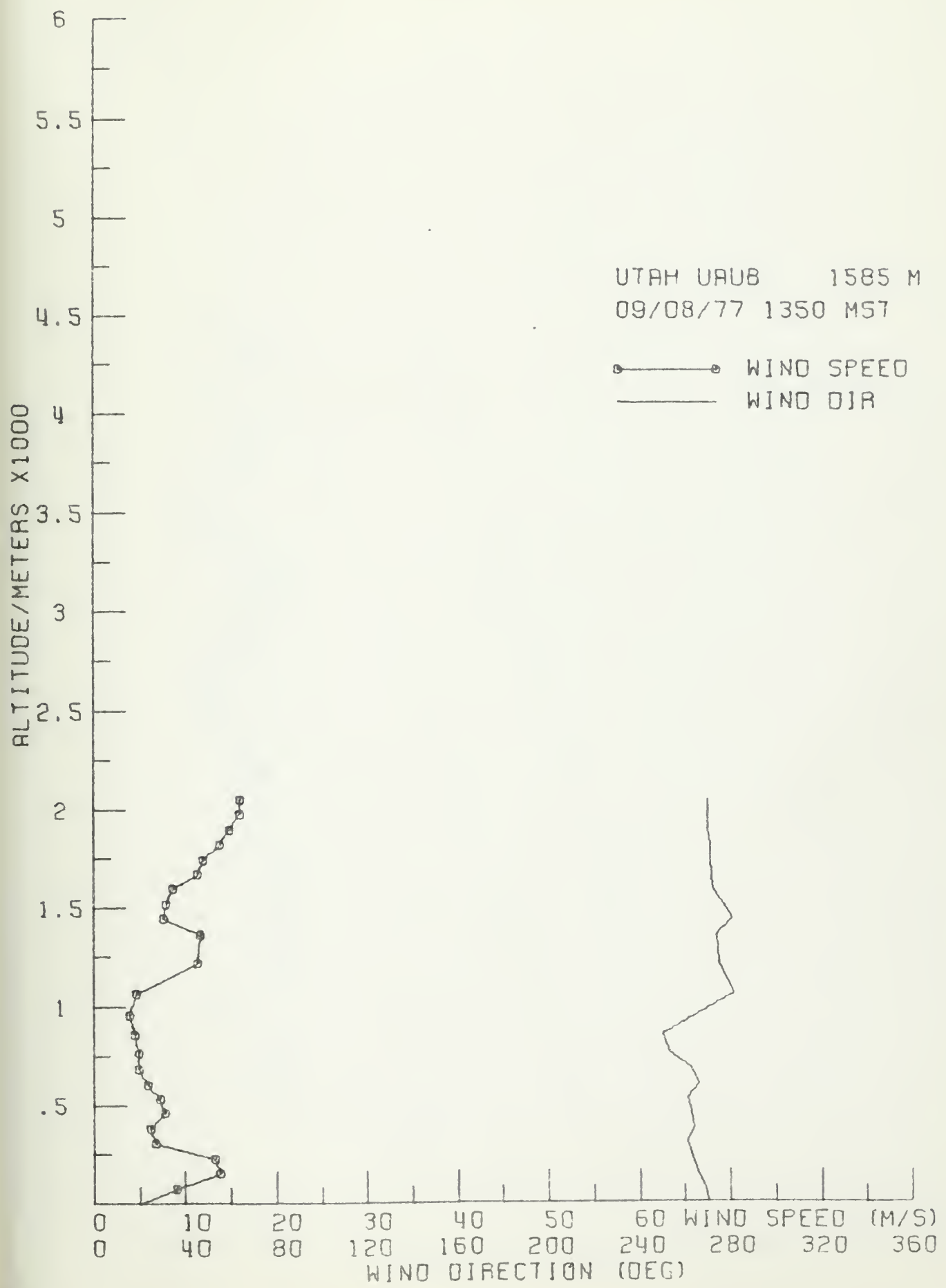


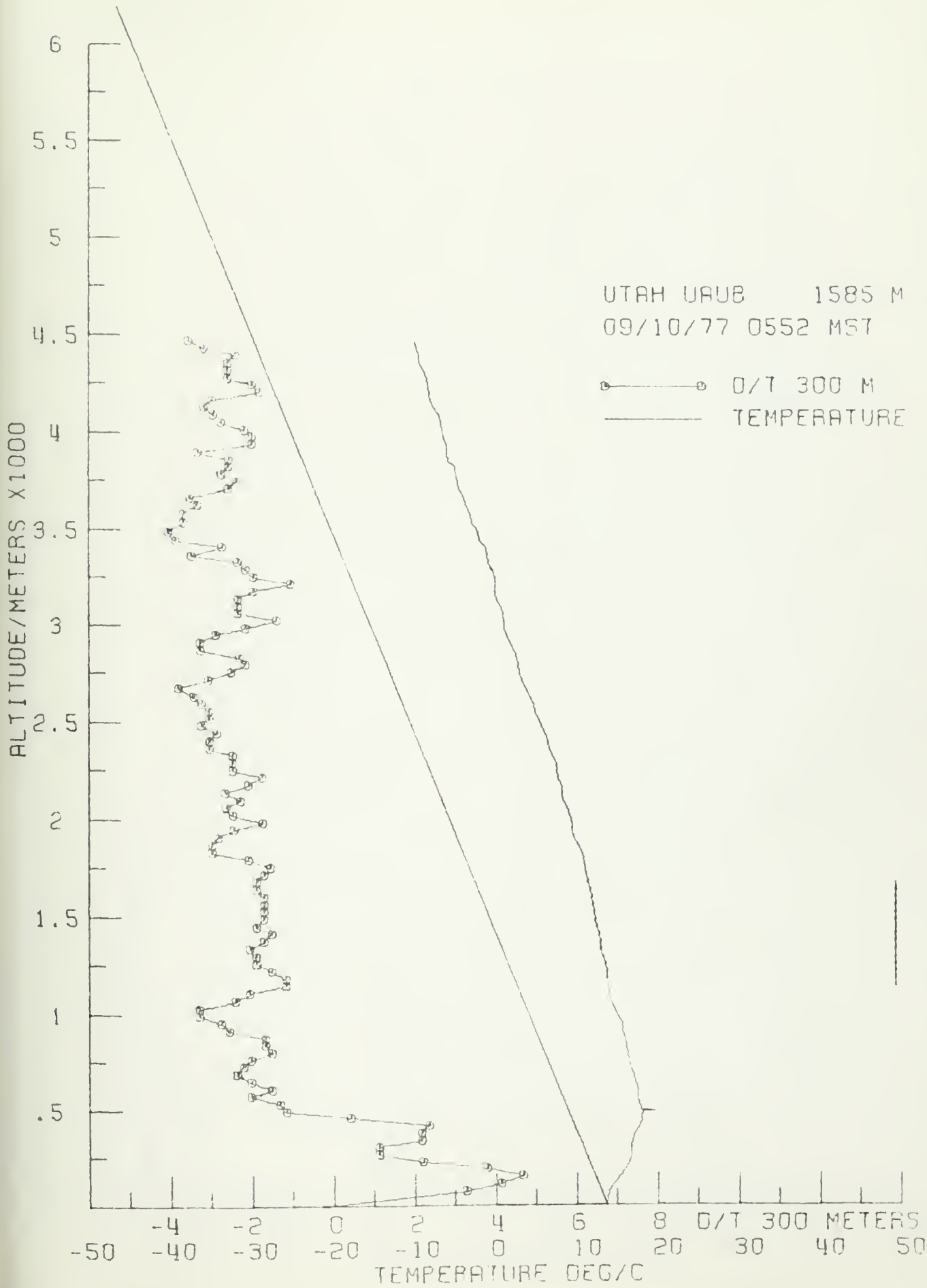
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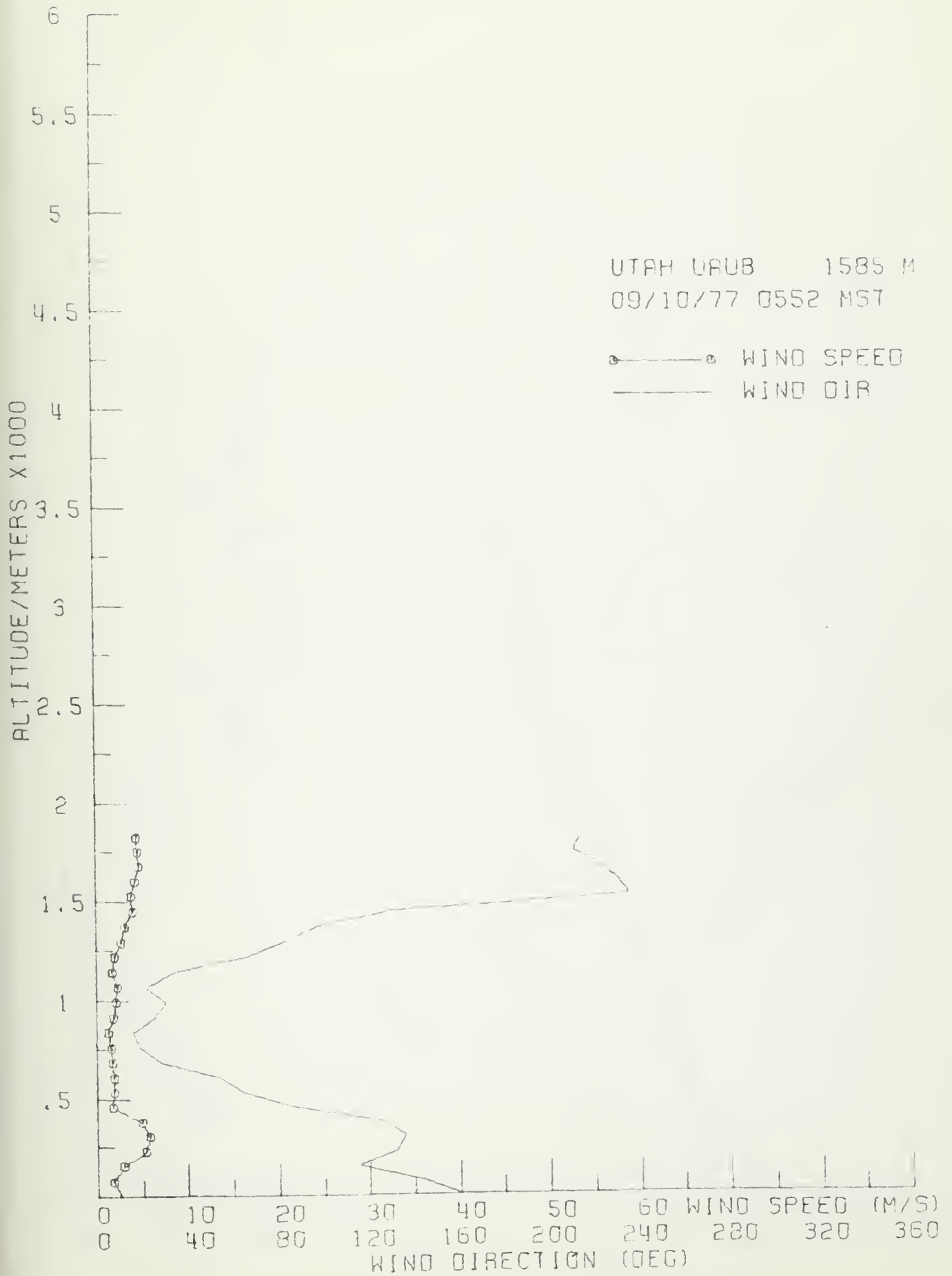




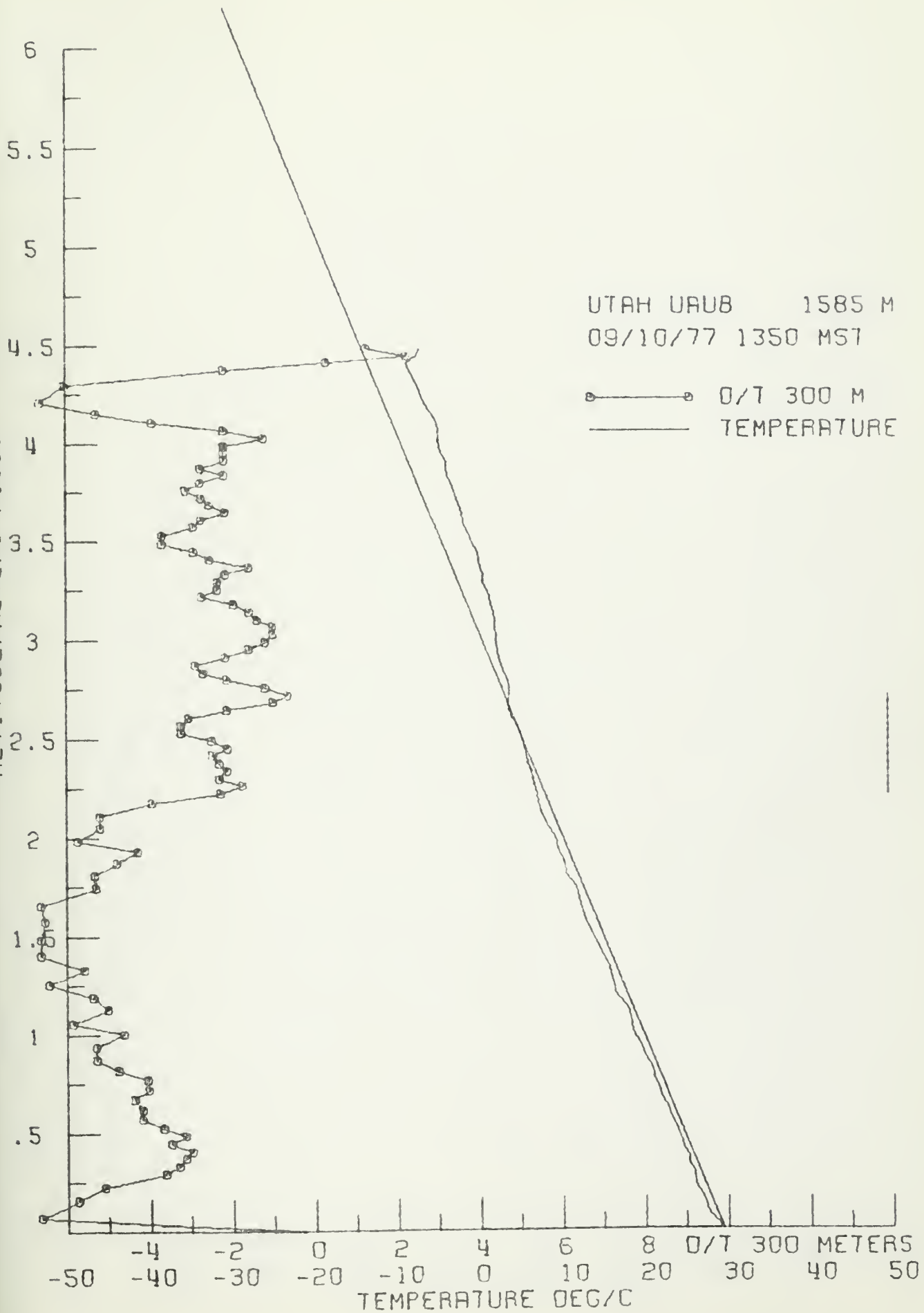


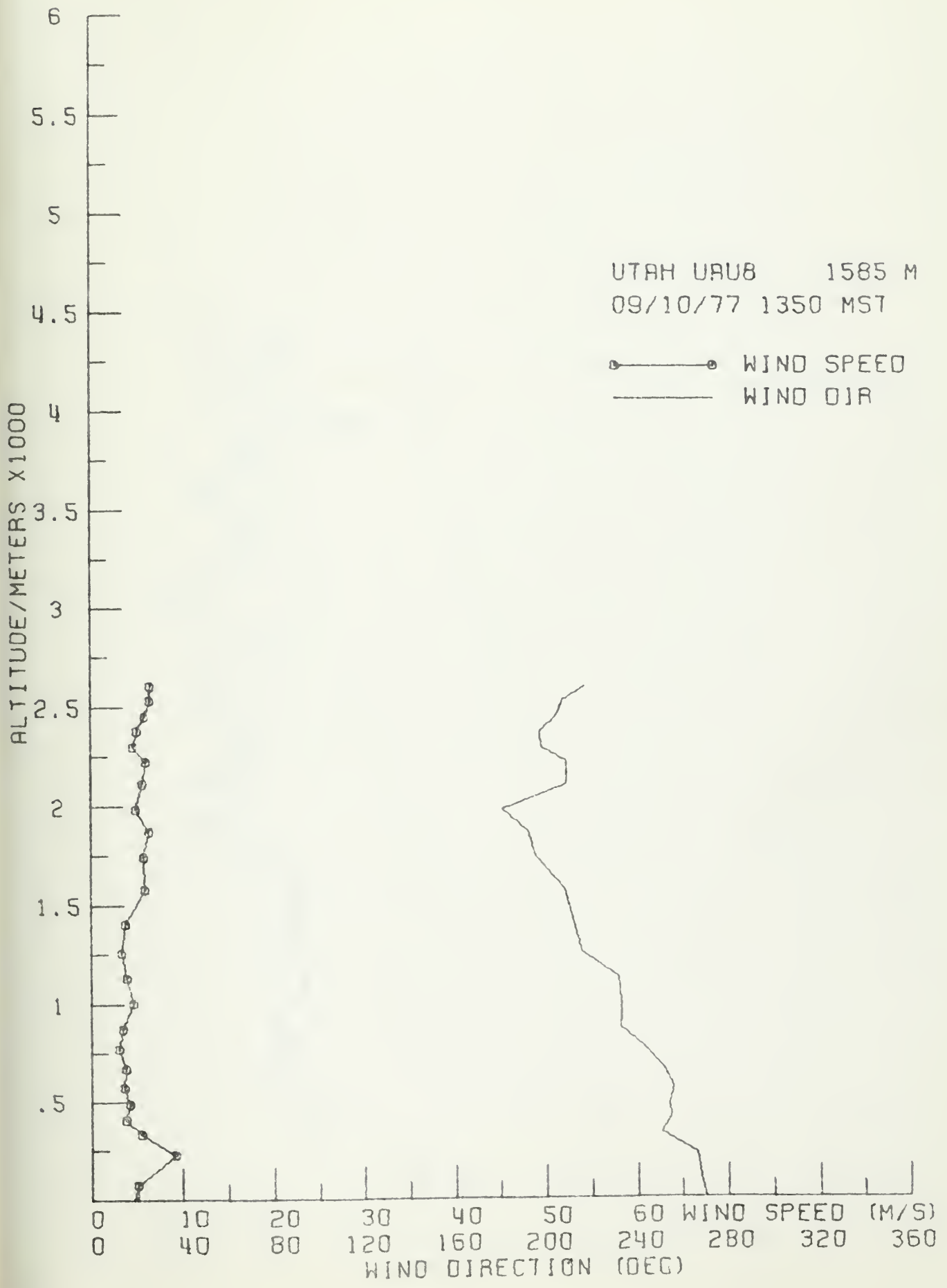




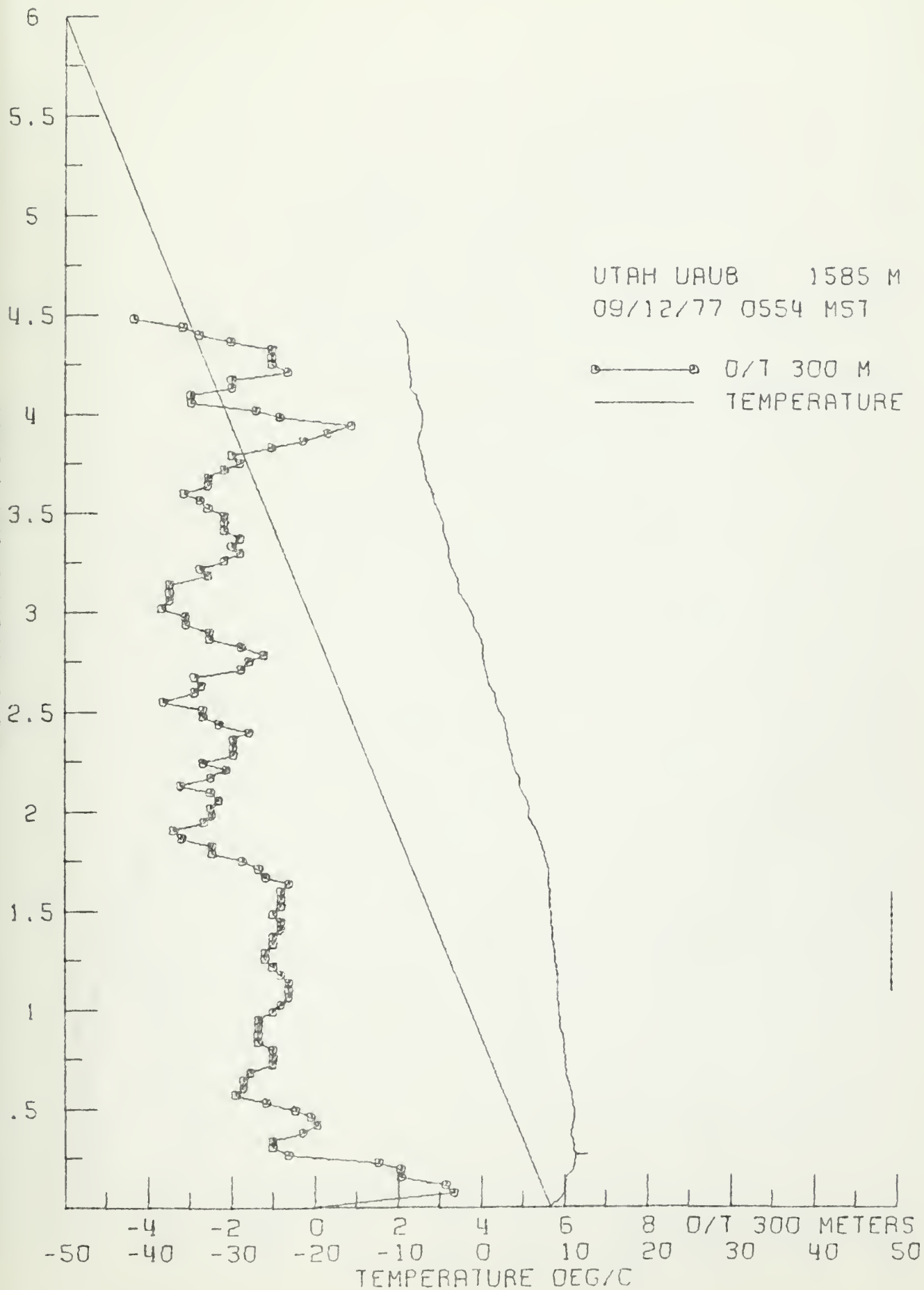


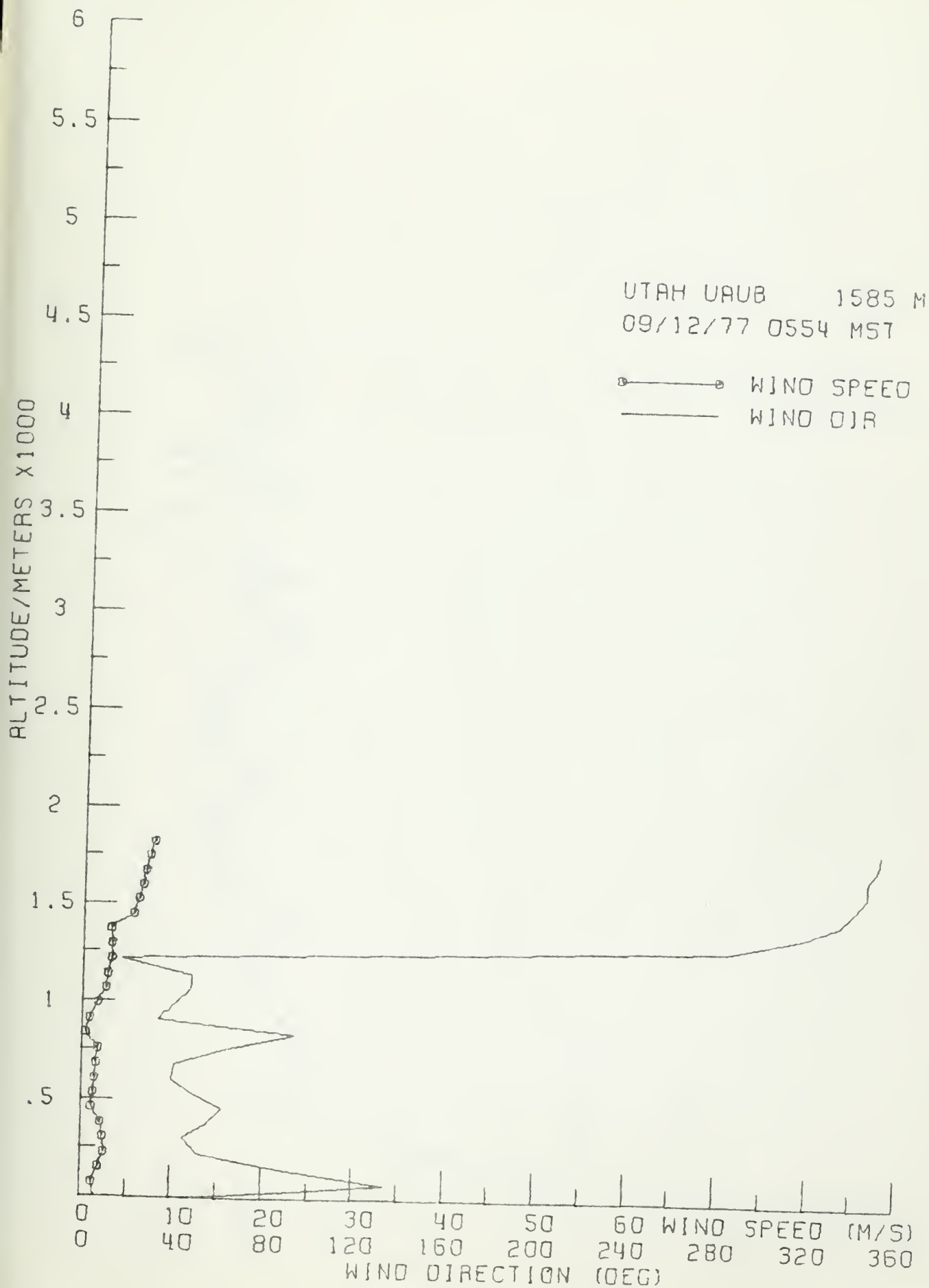
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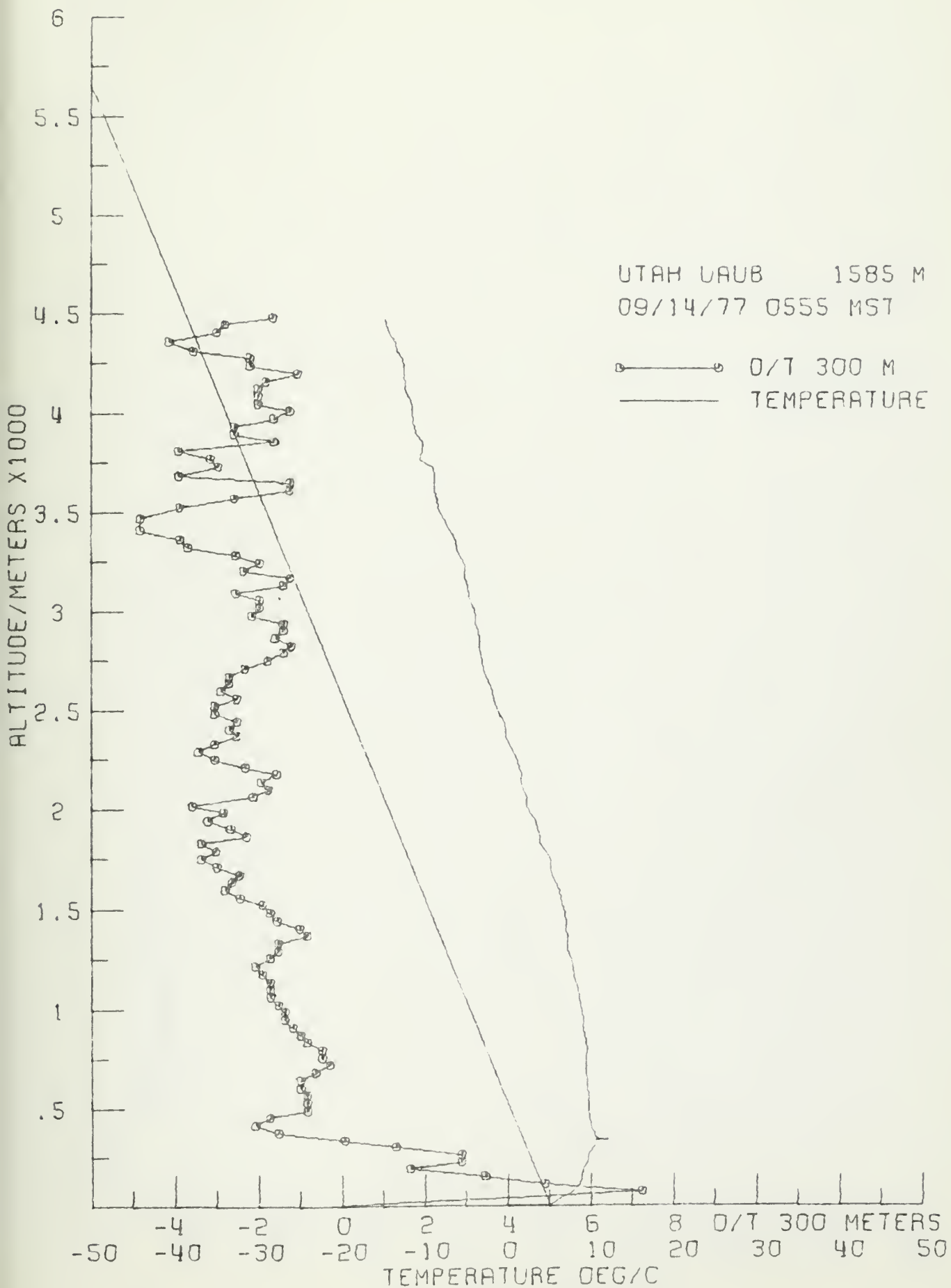




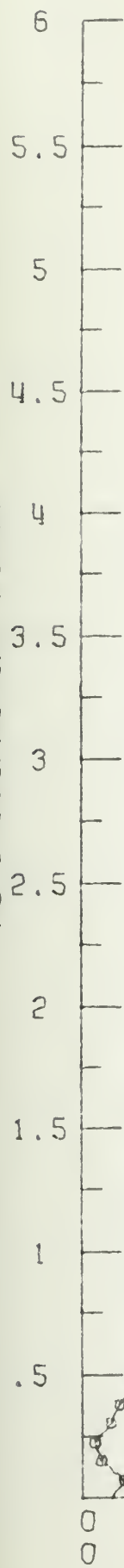
ALTITUDE/METERS X1000





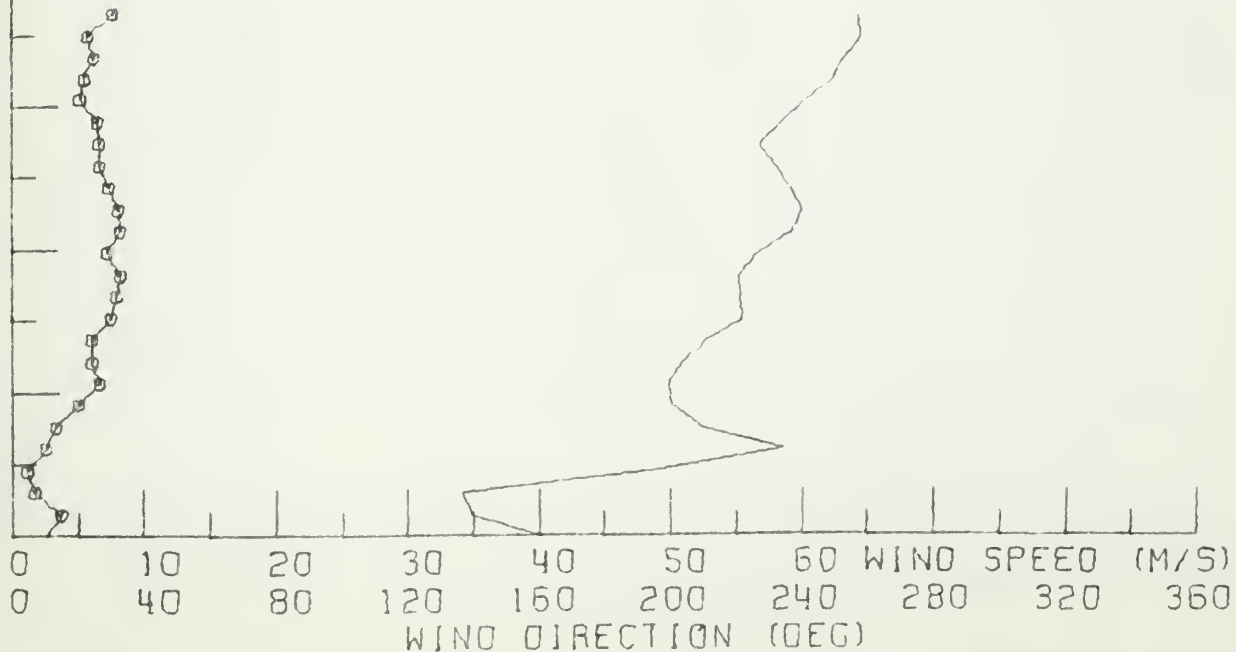
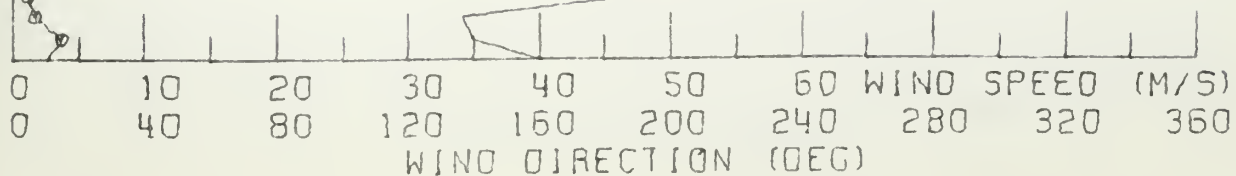


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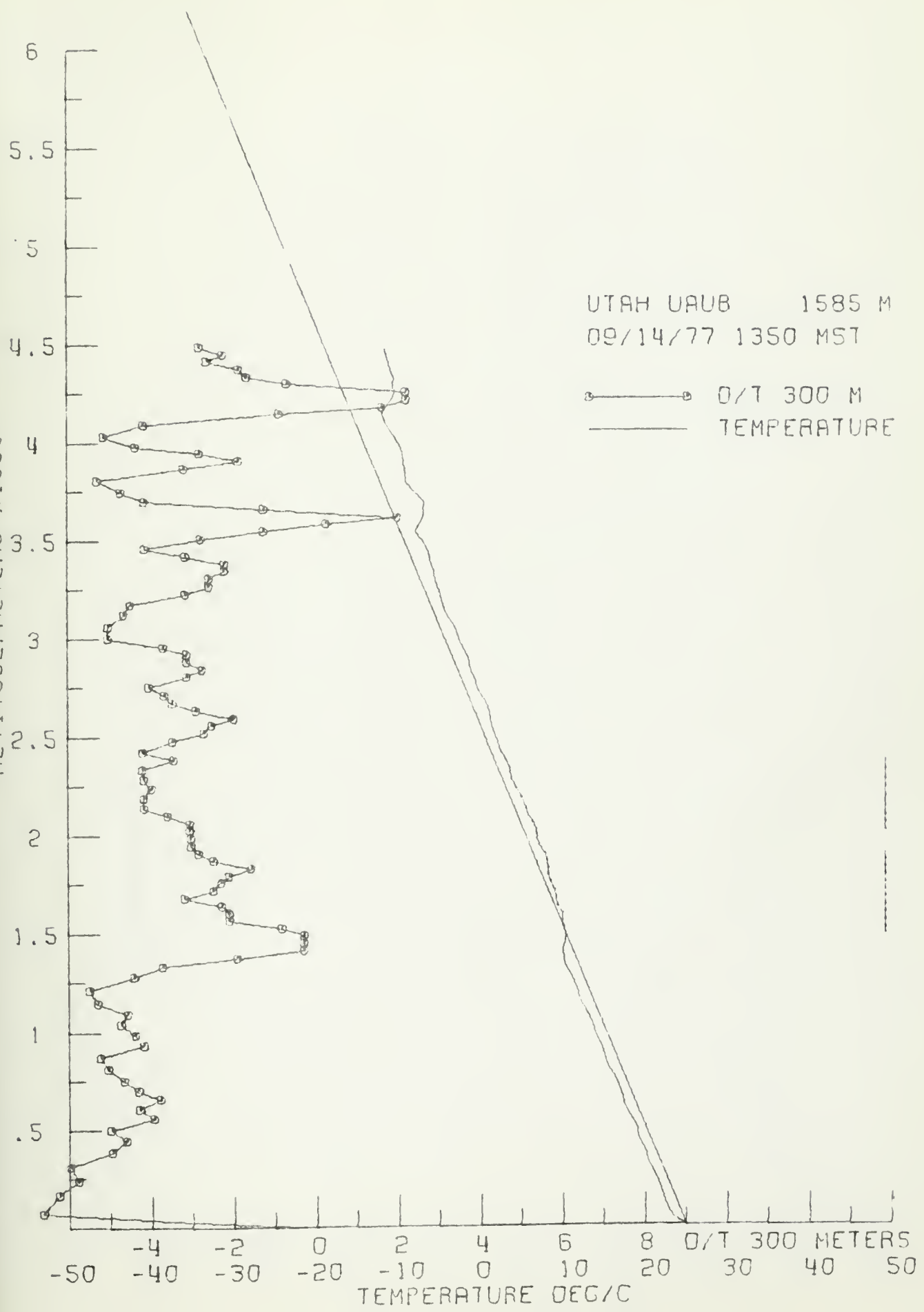


UTAH UAUB 1585 M
09/14/77 0555 MST

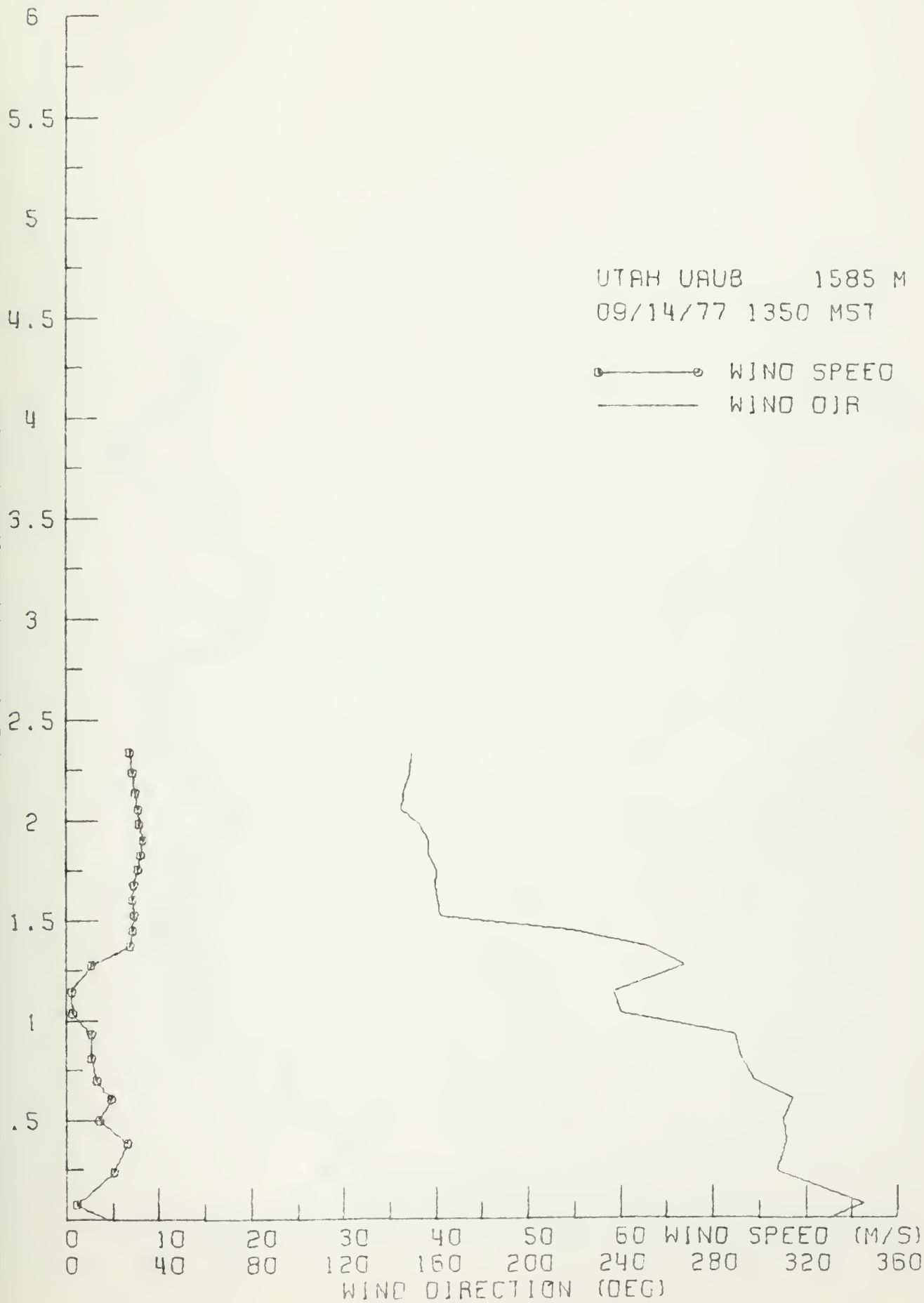
—○— WIND SPEED
— WIND DIR



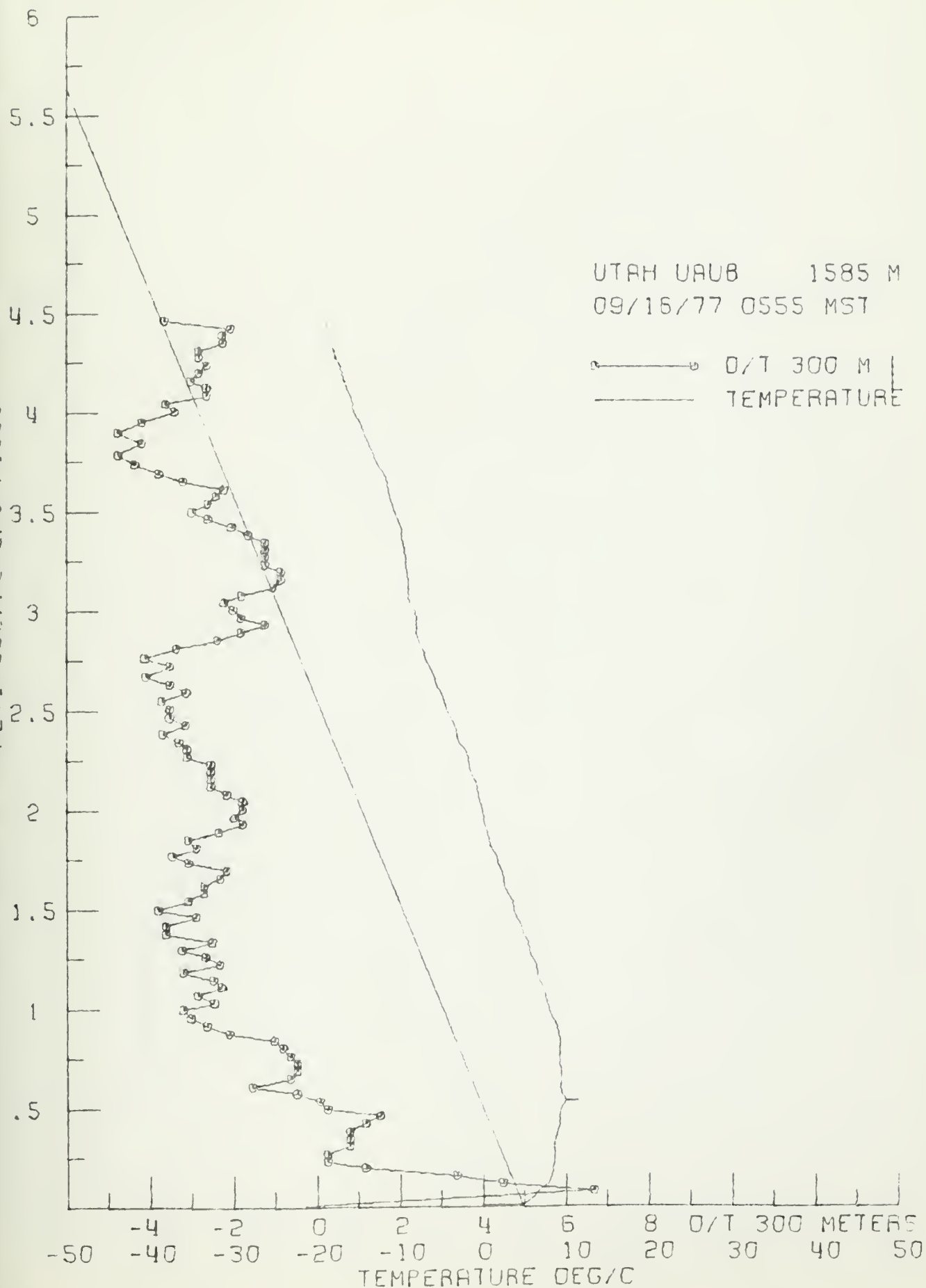
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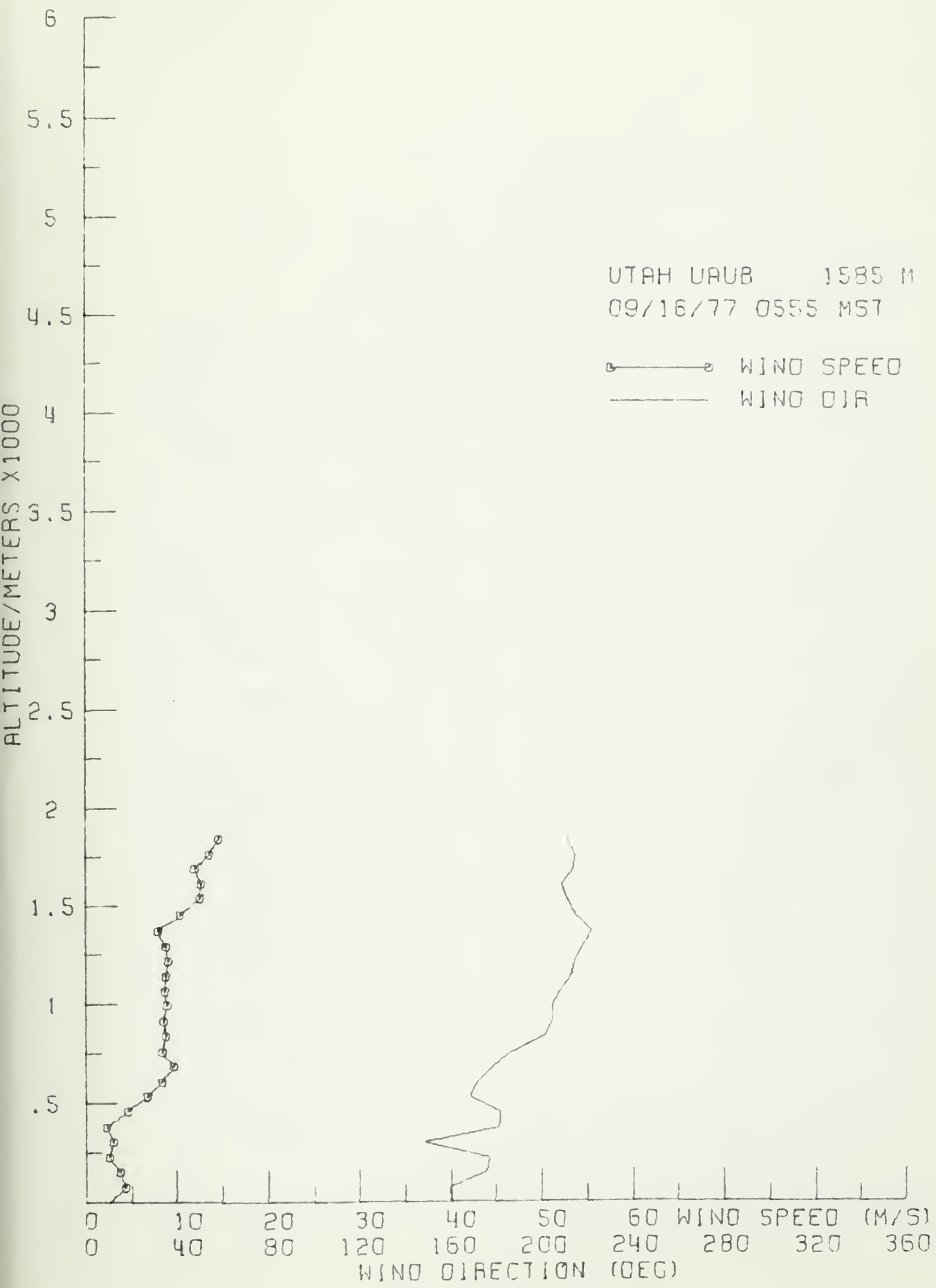


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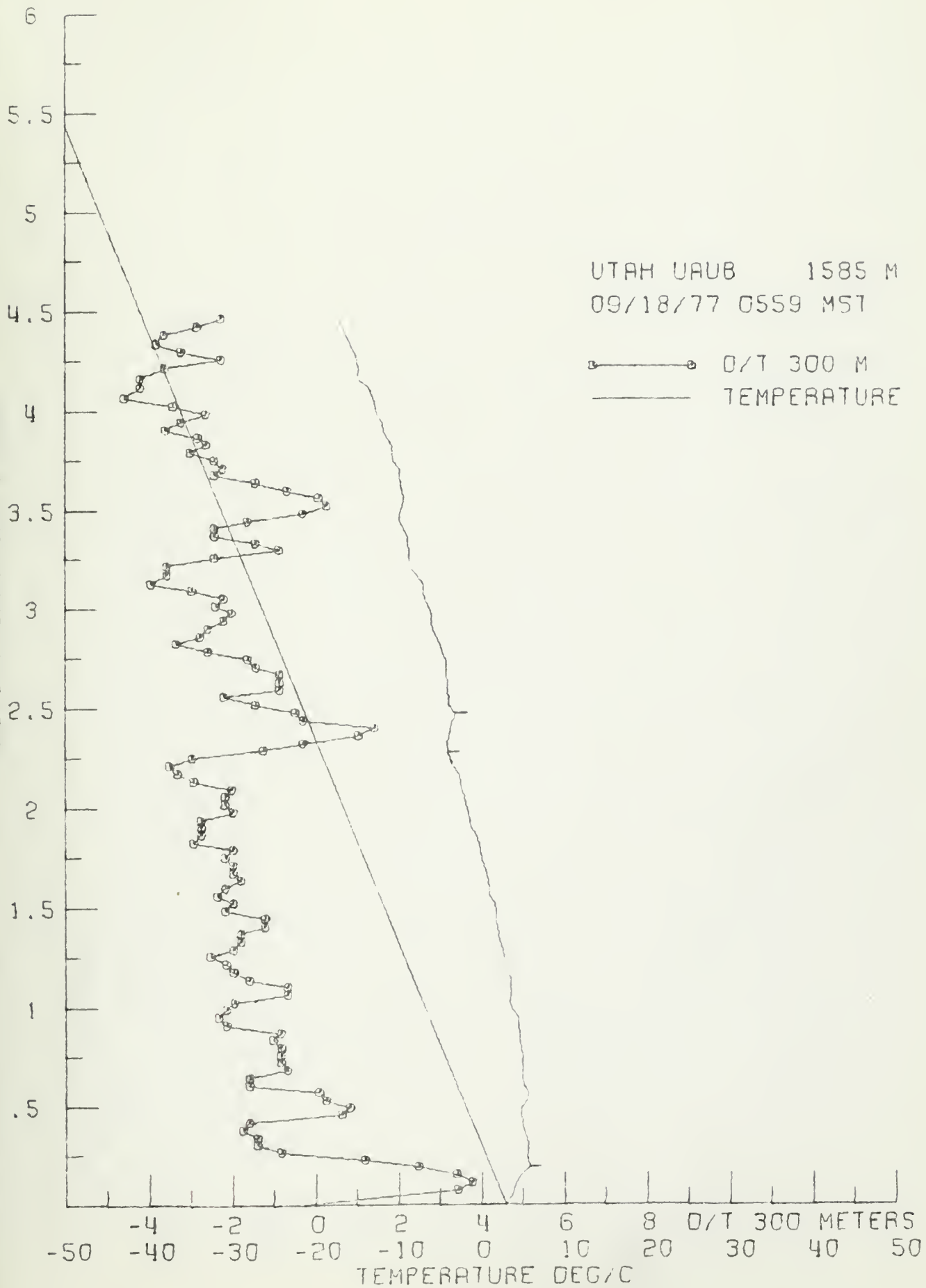


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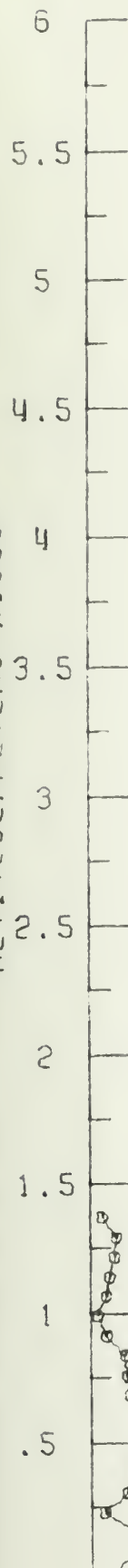




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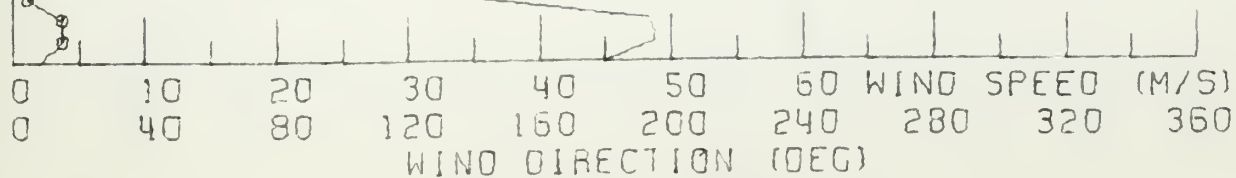


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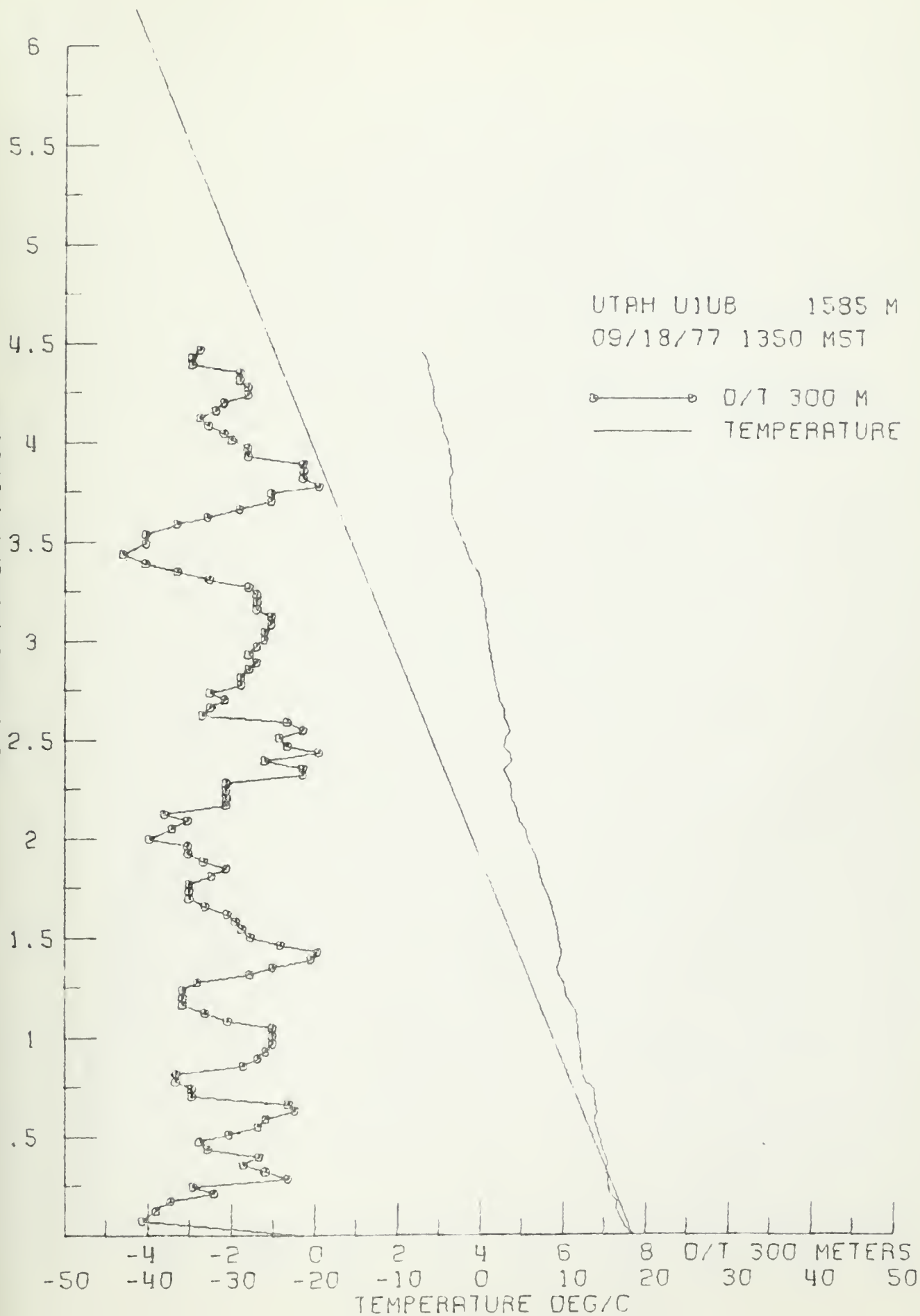


UTAH UAV8 1585 M
09/18/77 0559 MST

—○— WIND SPEED
— WIND DIR



ALTITUDE/METERS X1000

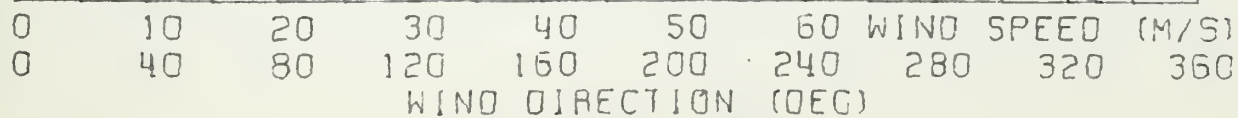


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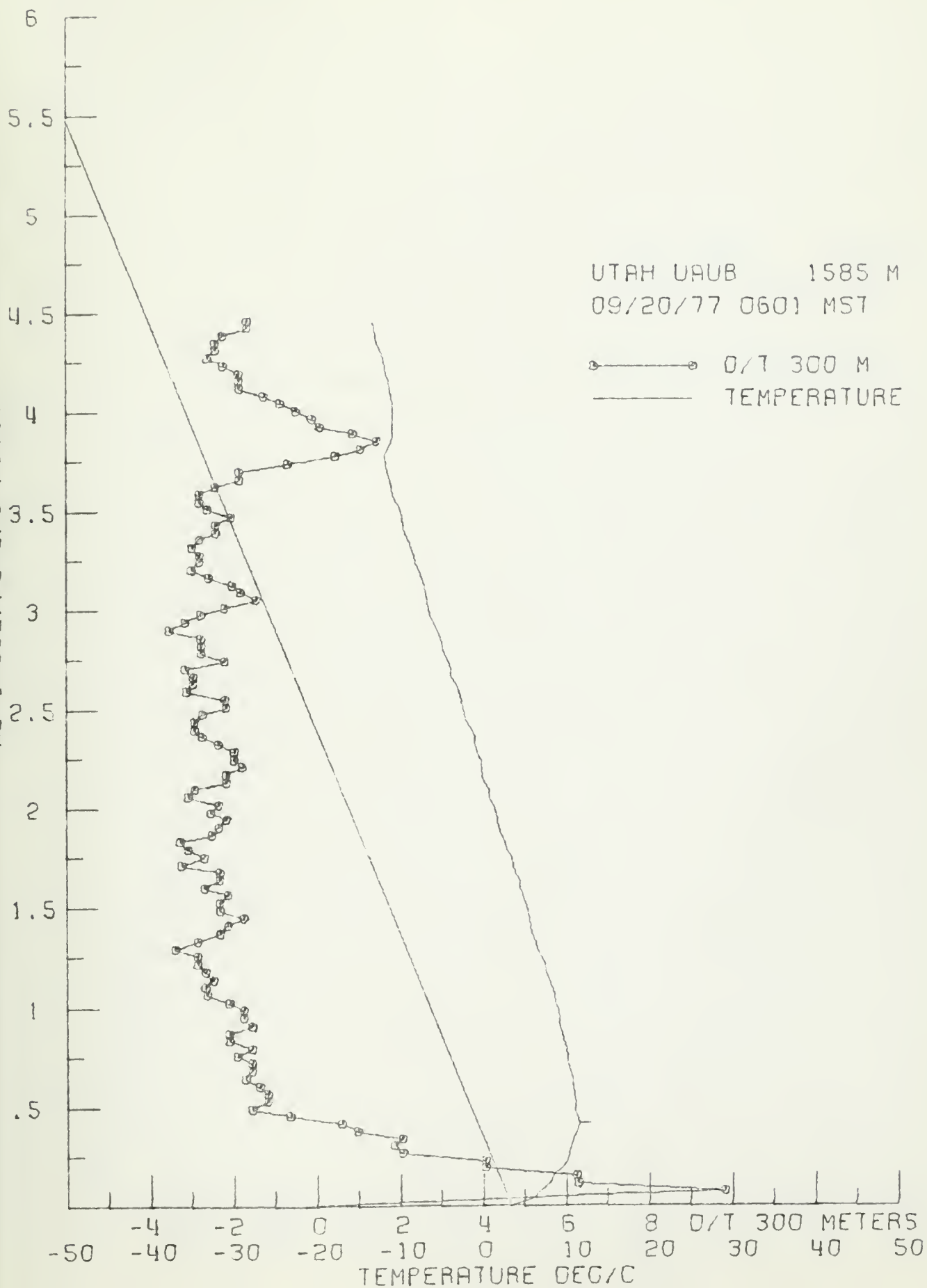


UTAH U10B 1585 M
09/18/77 1350 MST

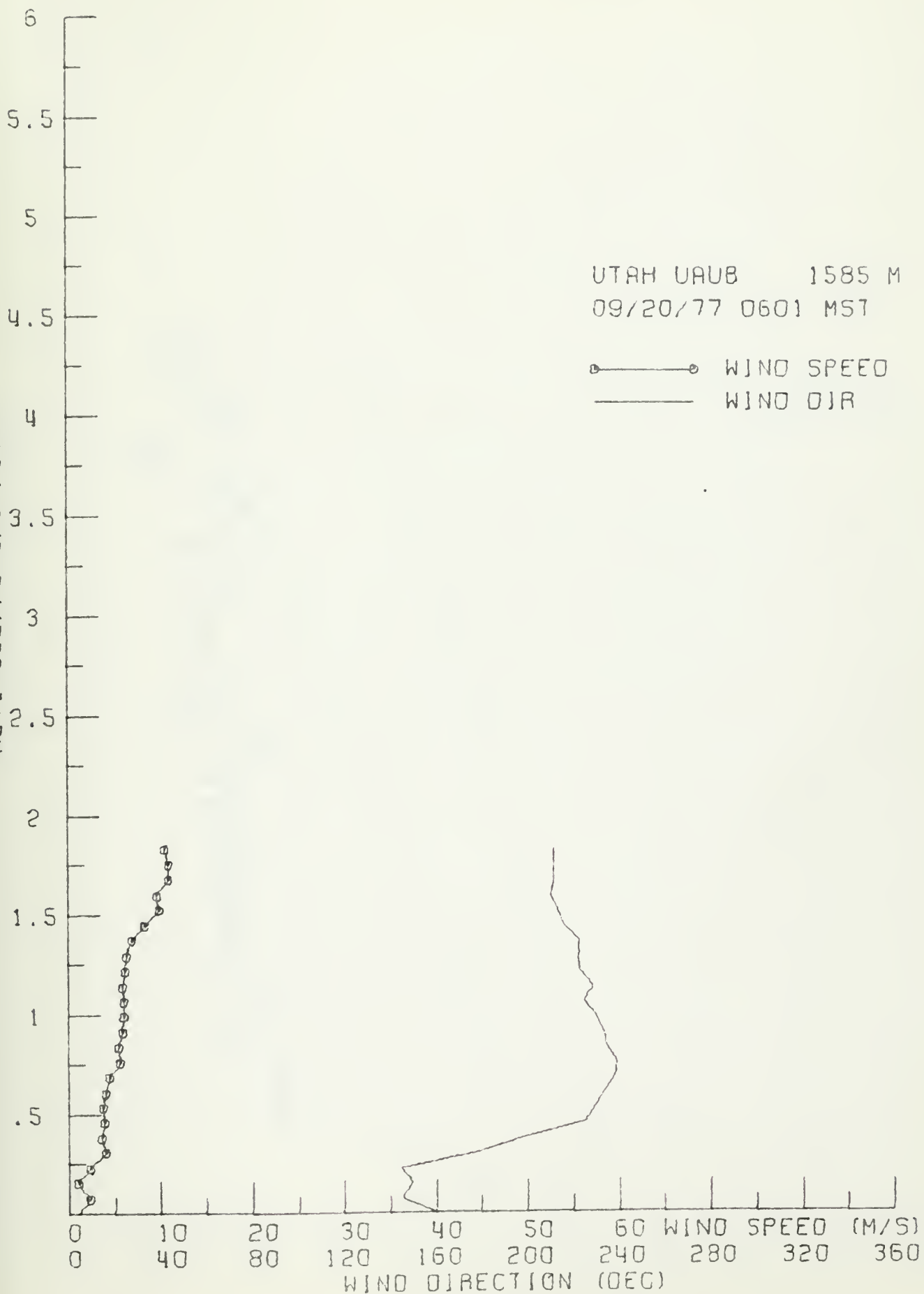
WIND SPEED
WIND DIR

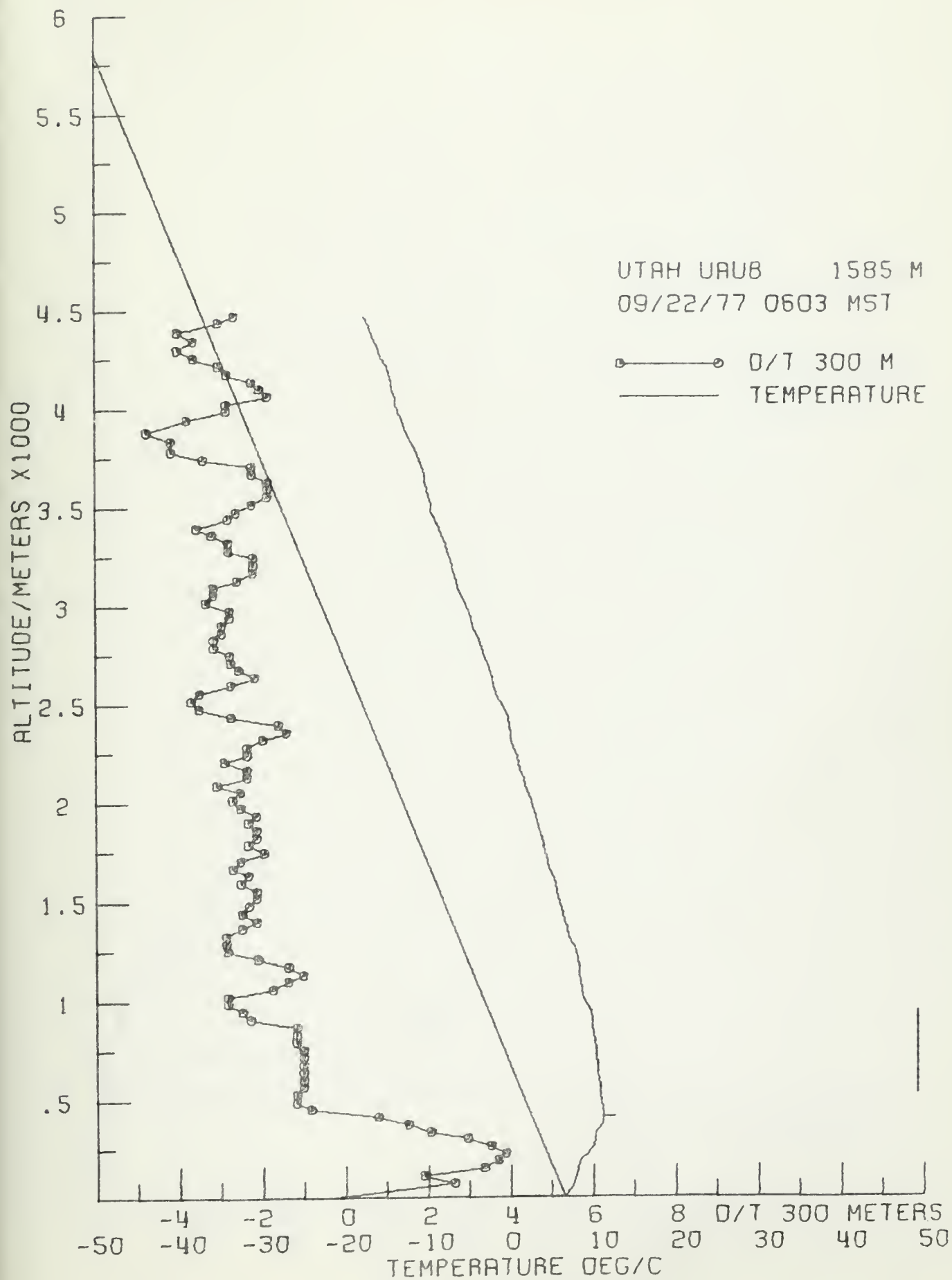


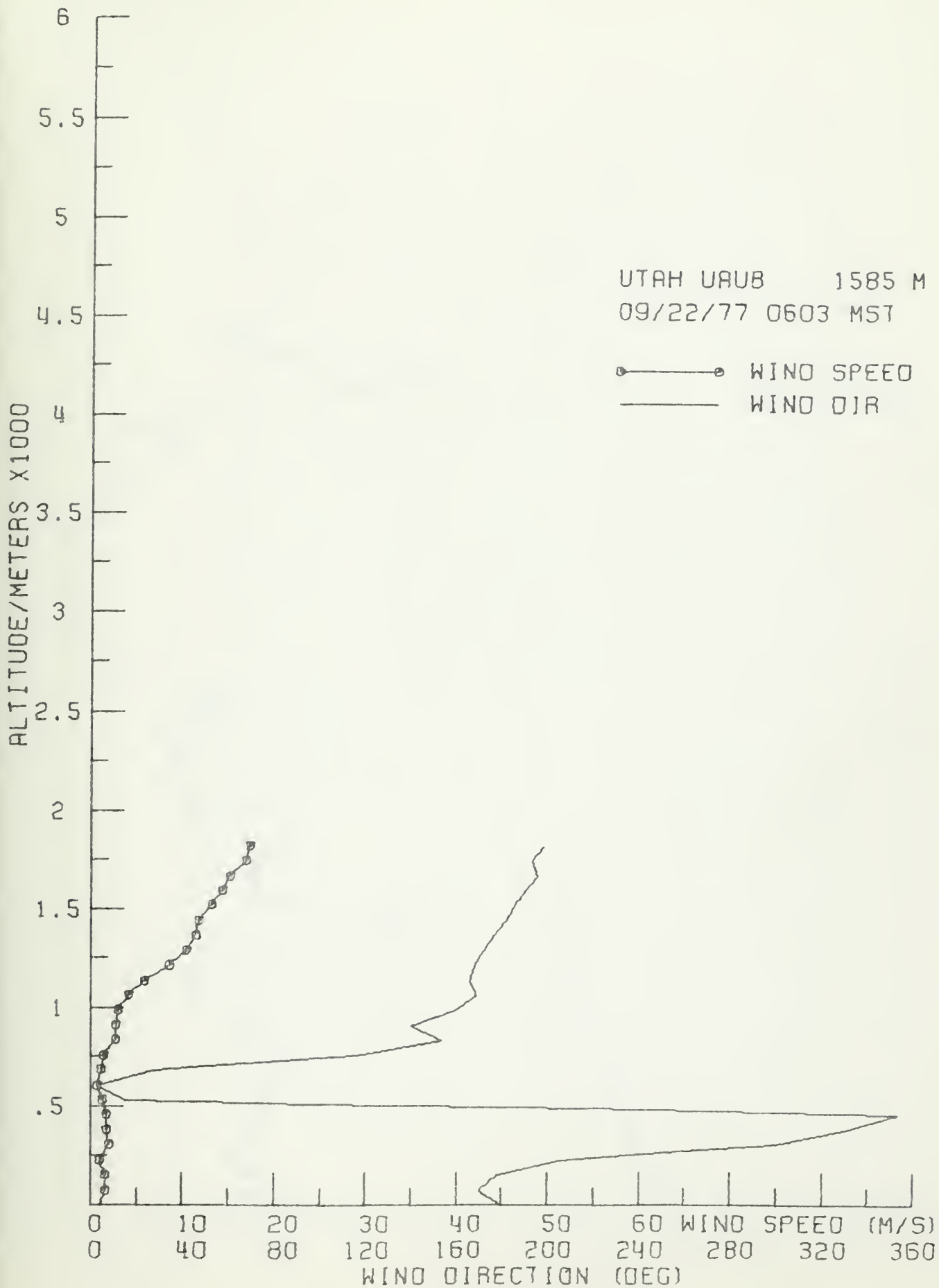
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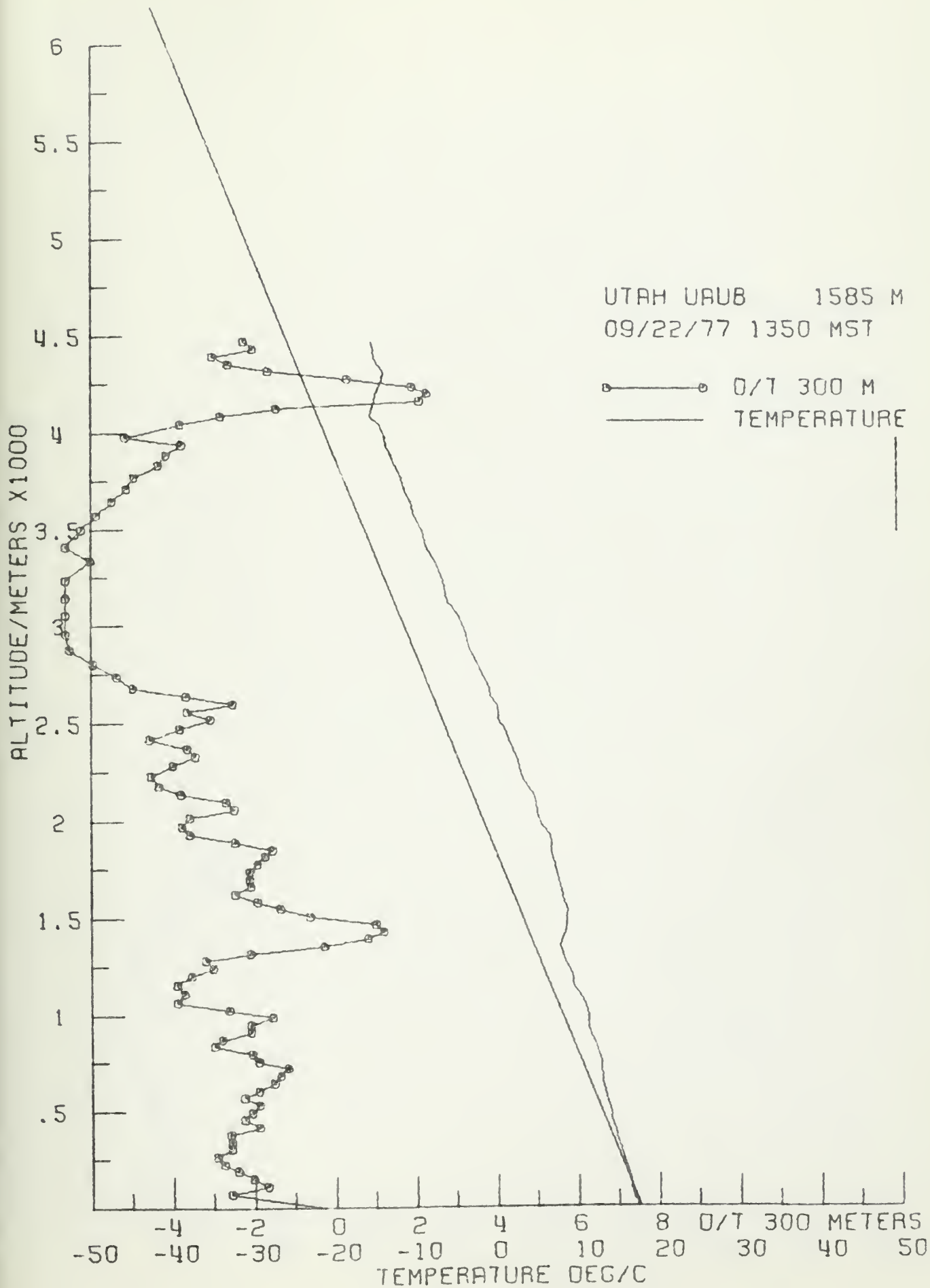


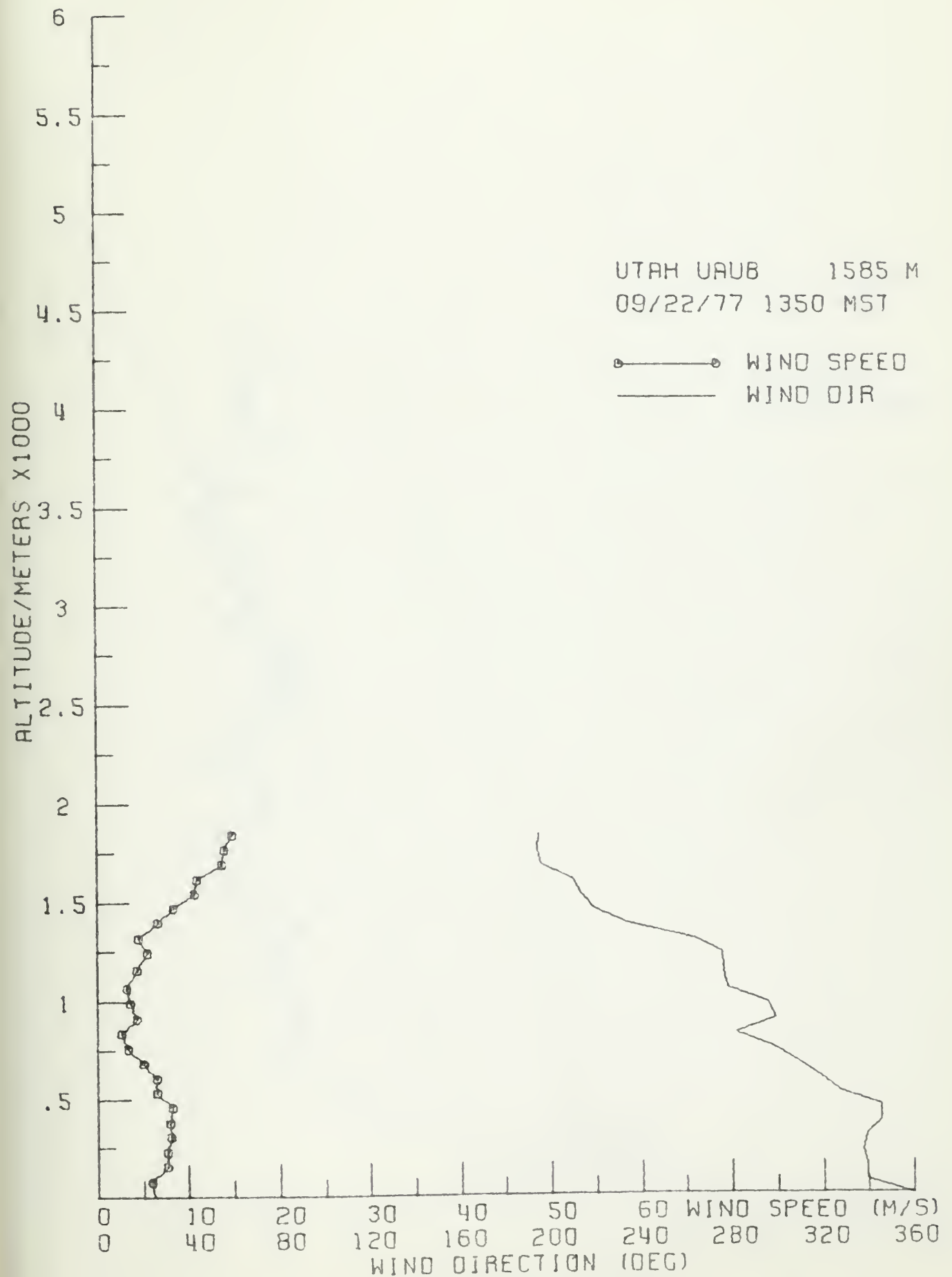
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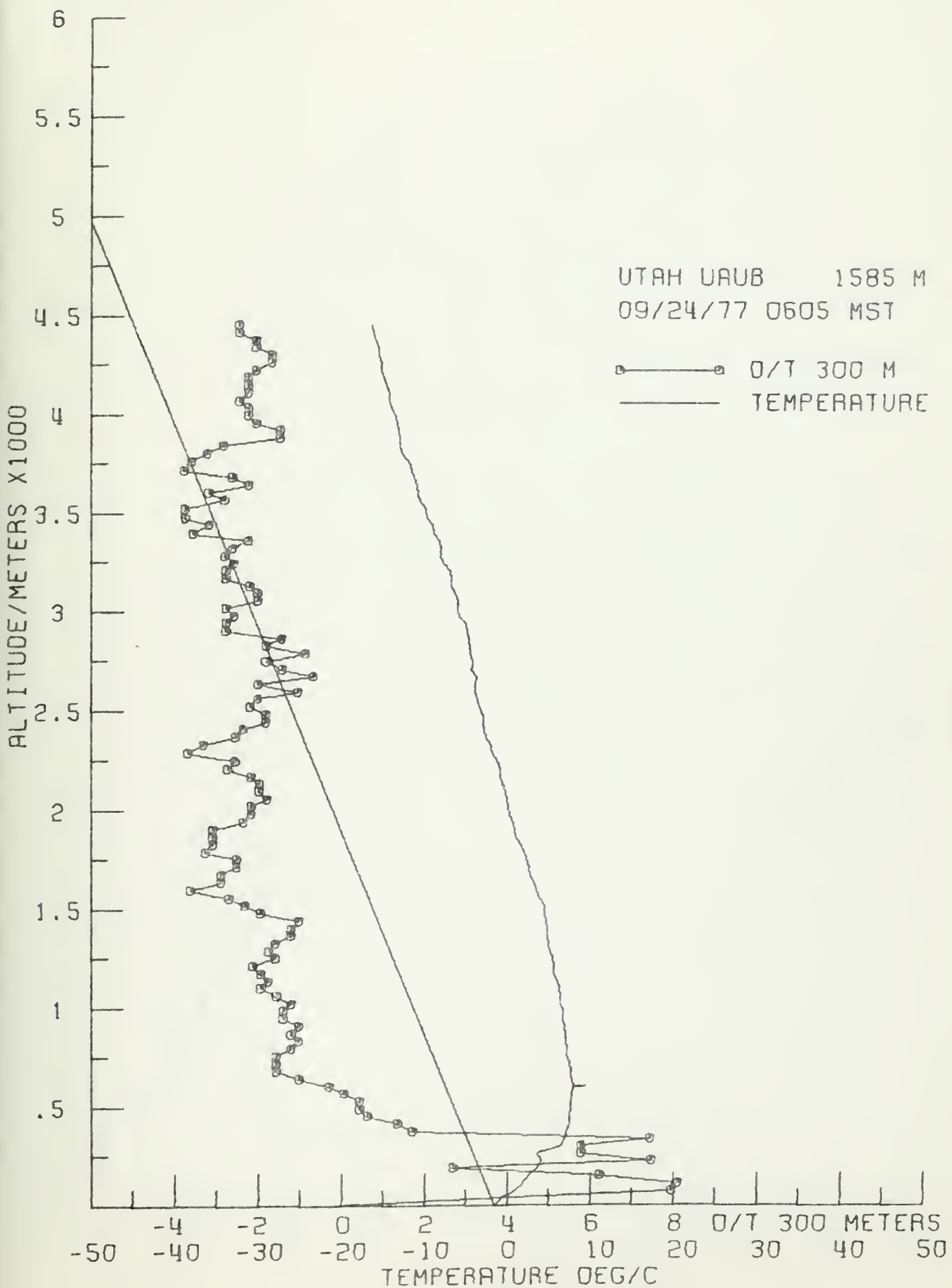


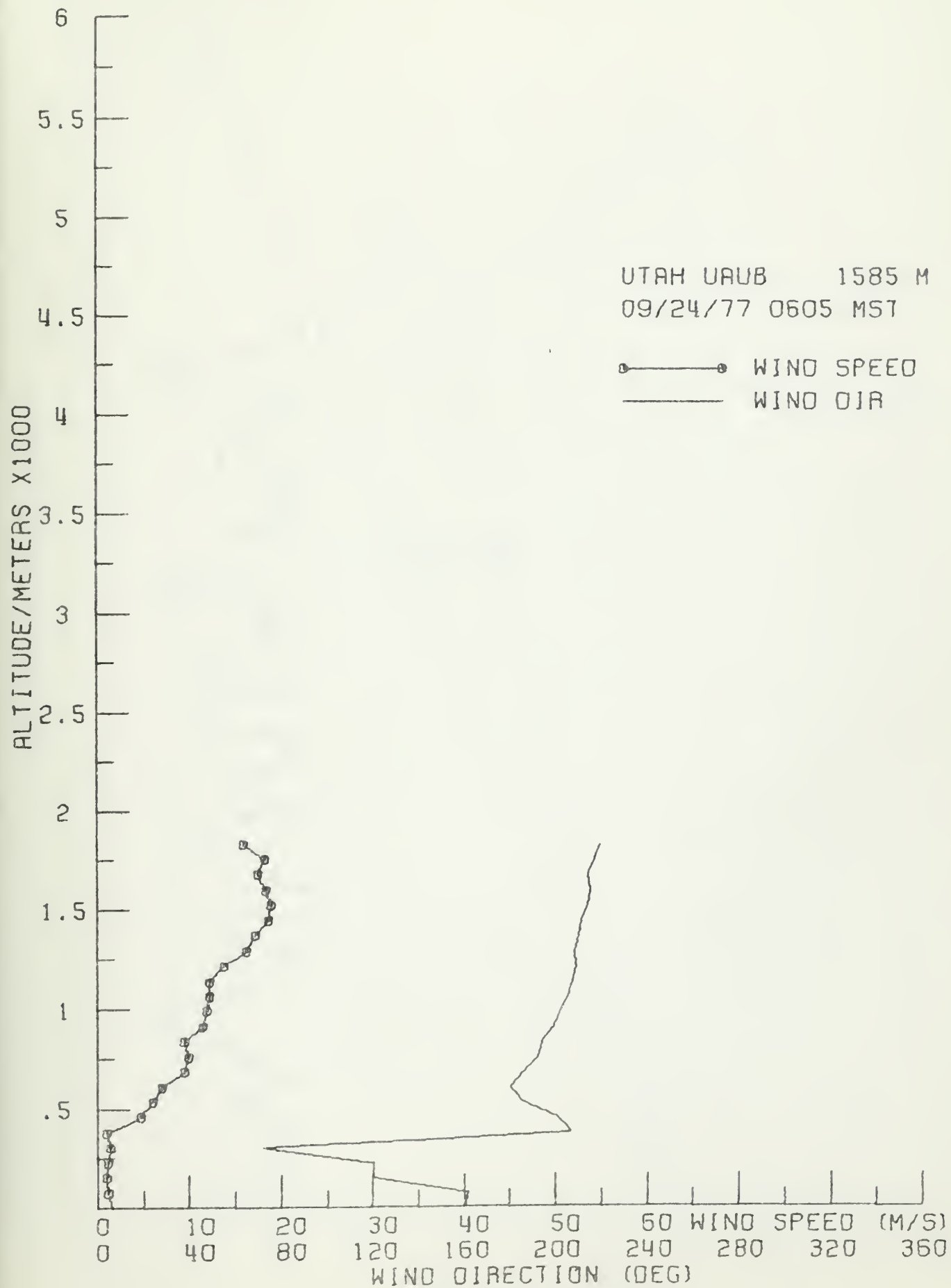


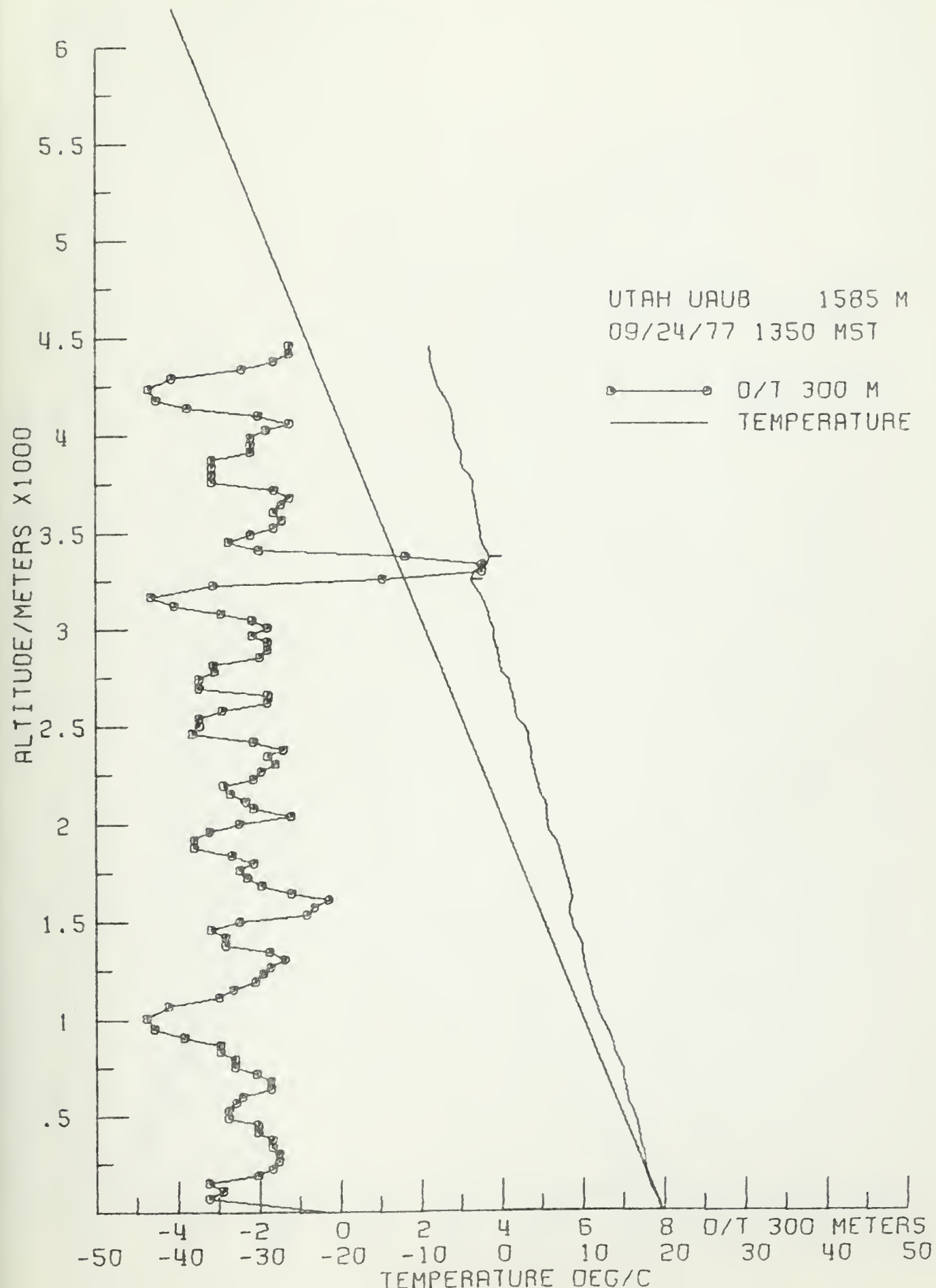


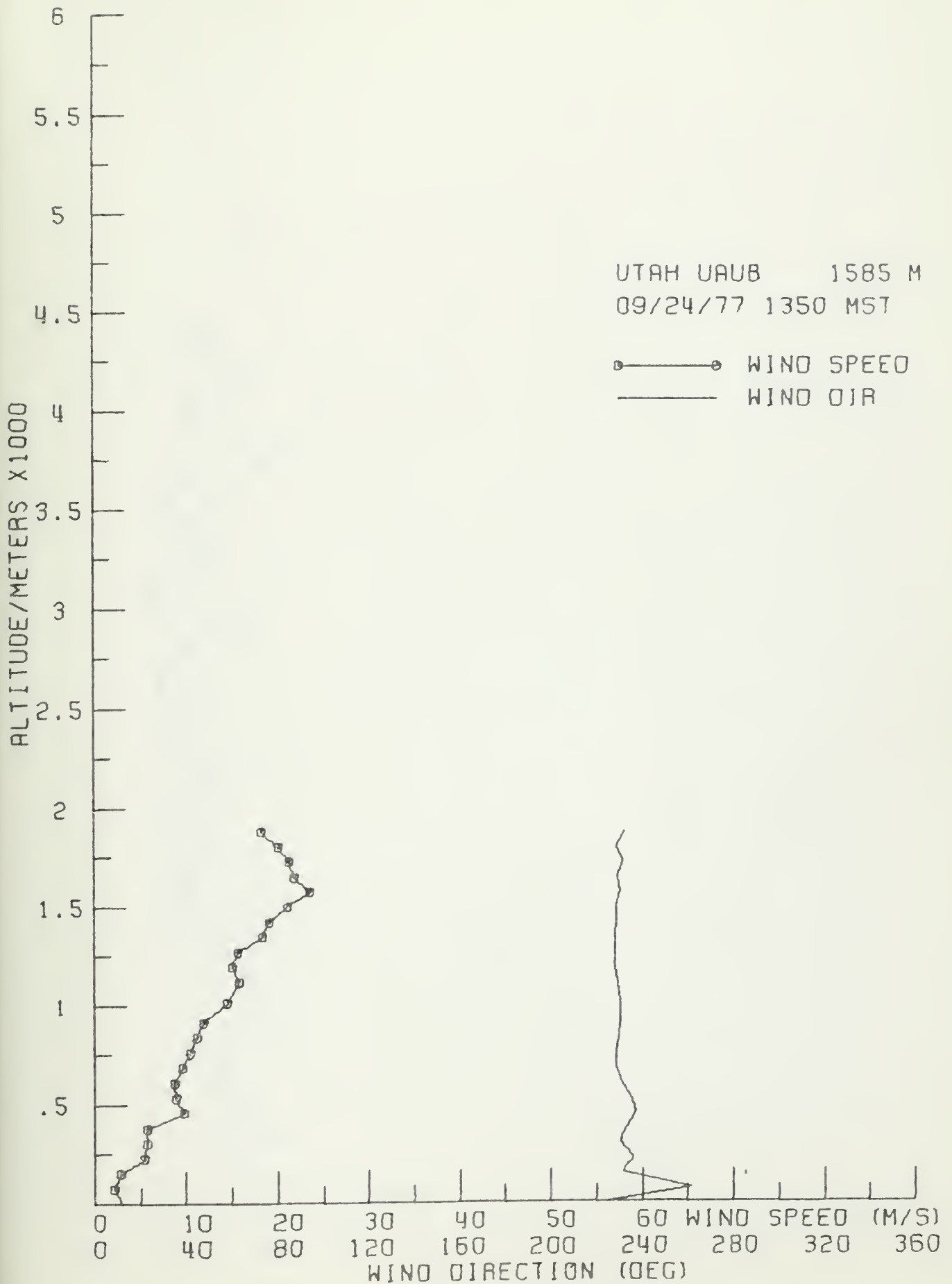


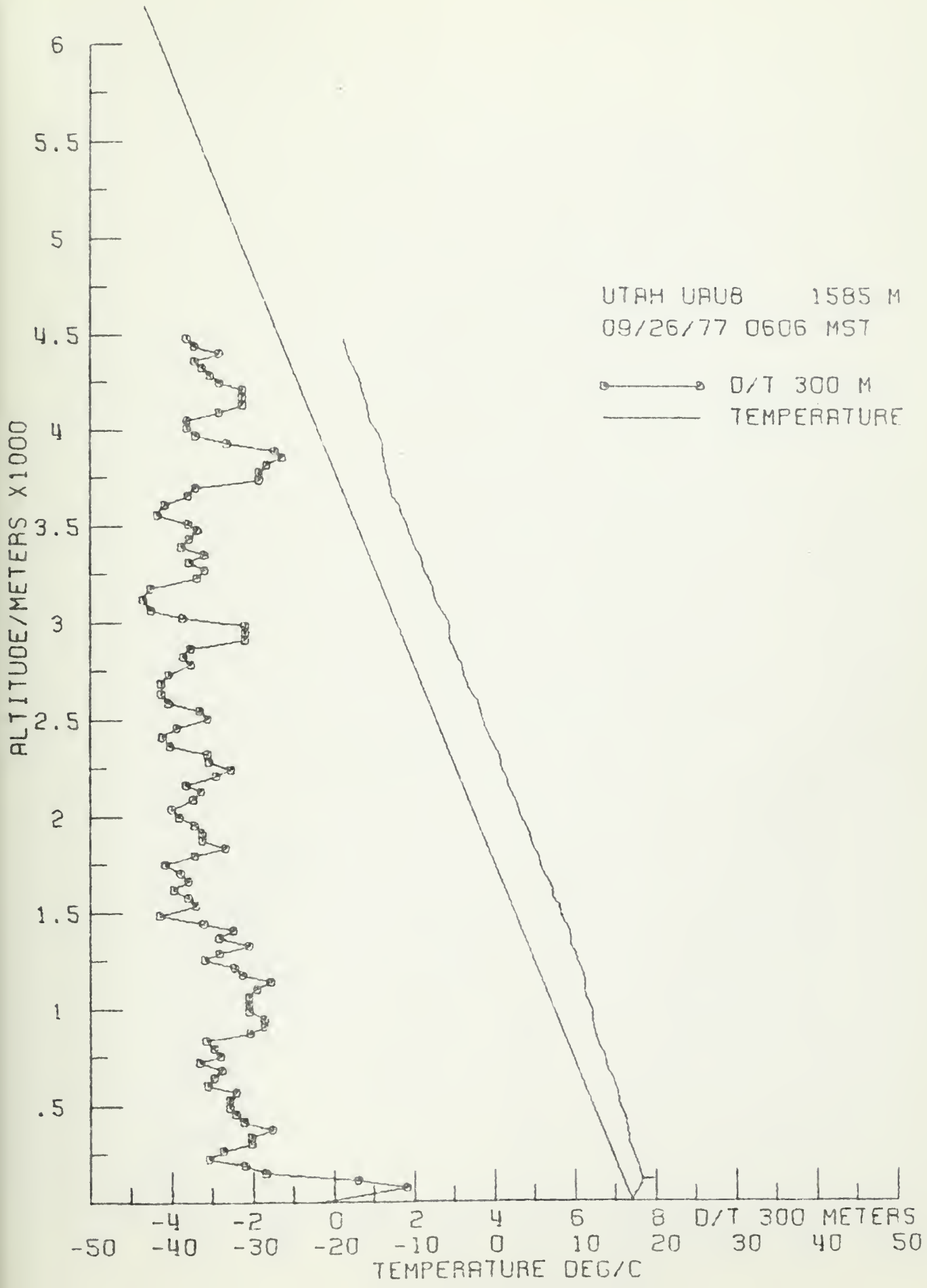


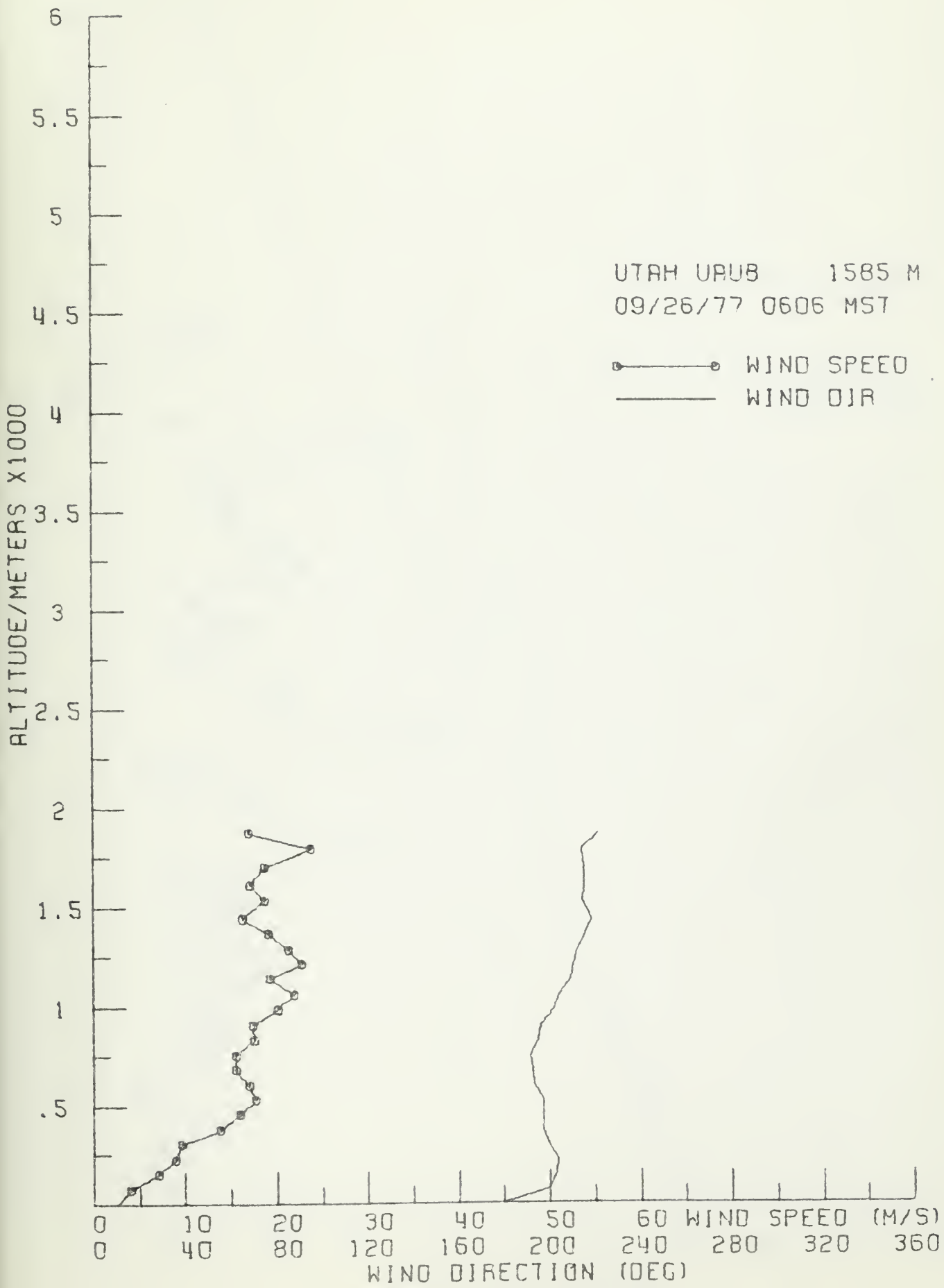


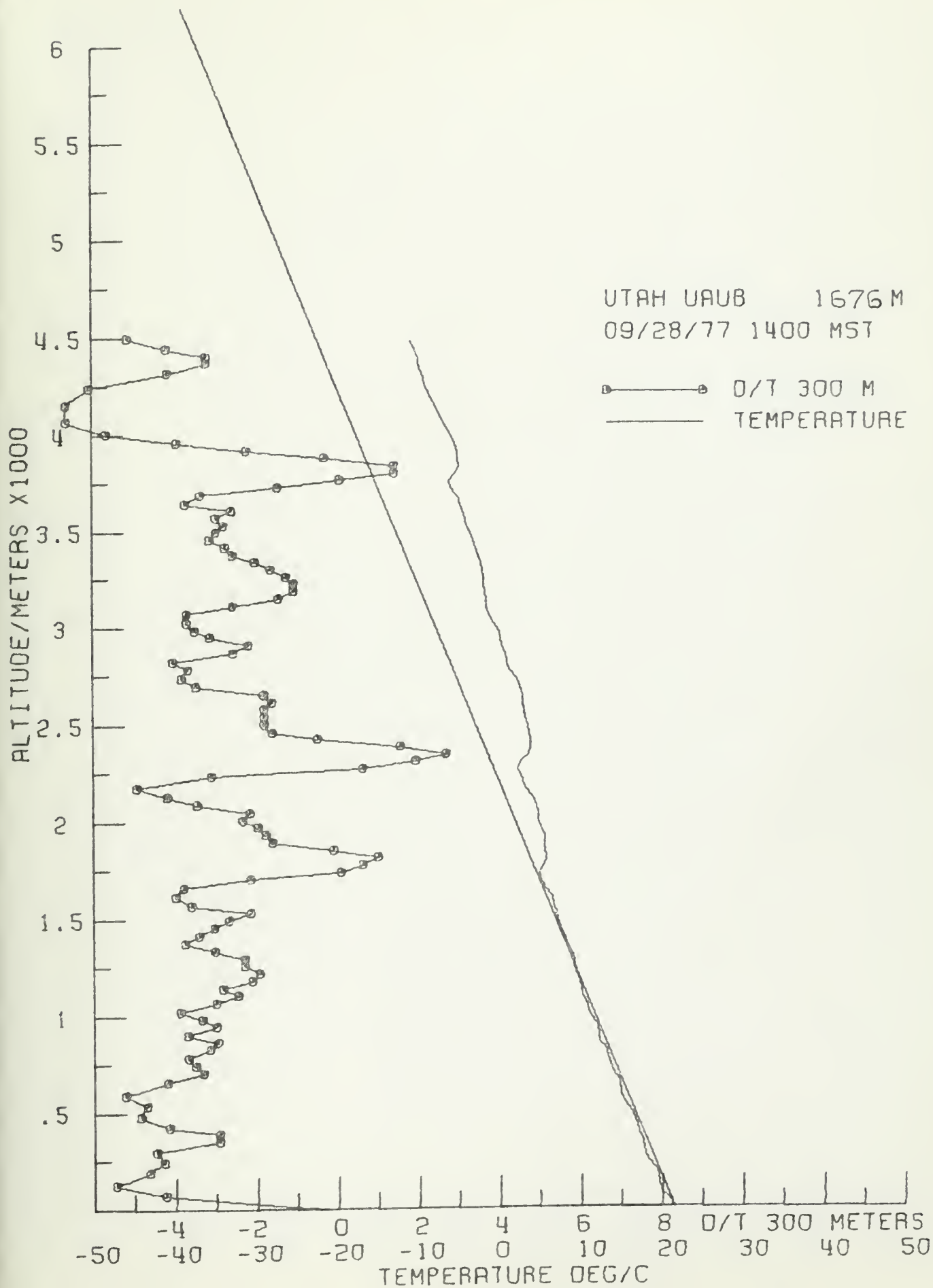


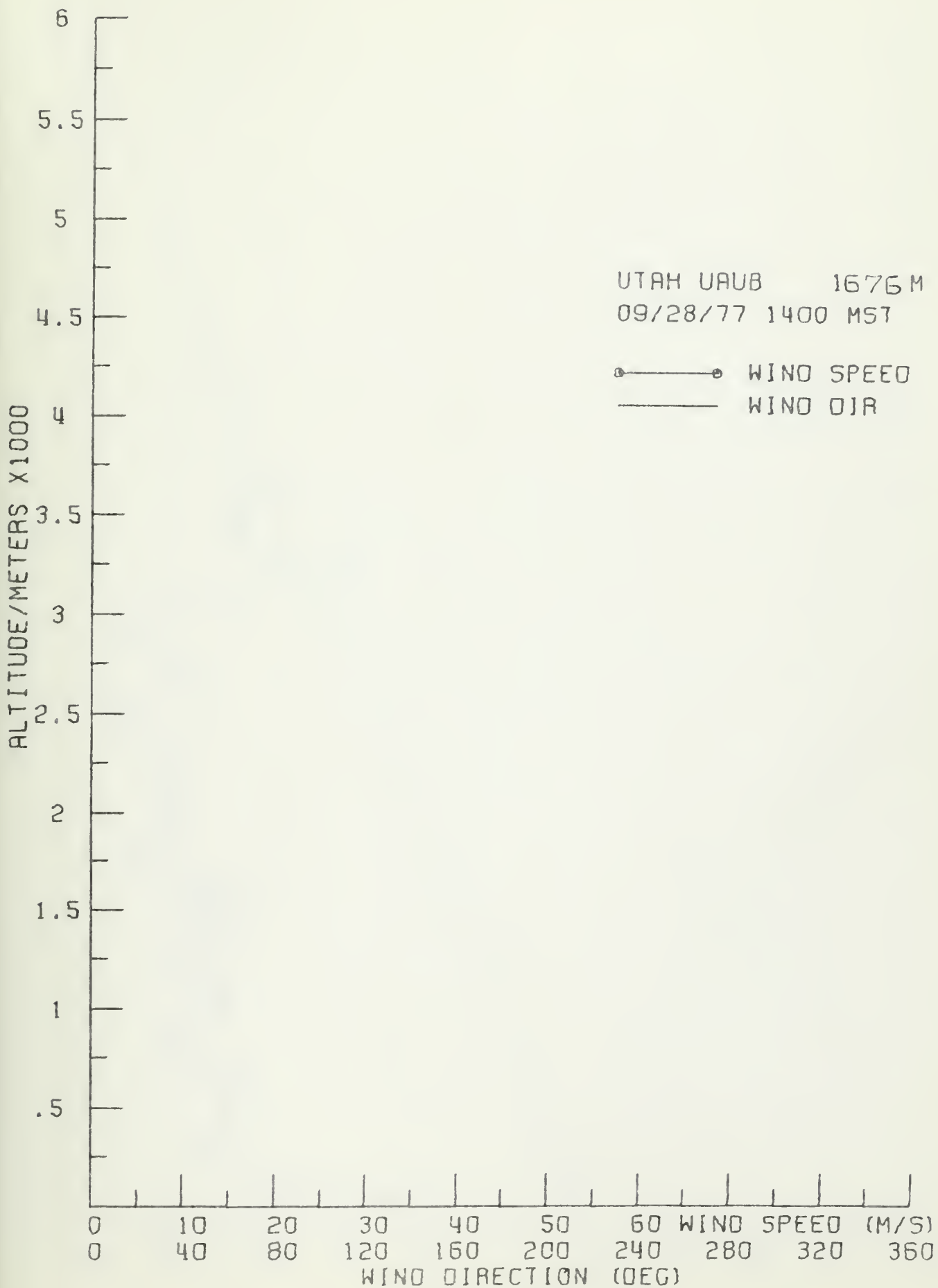


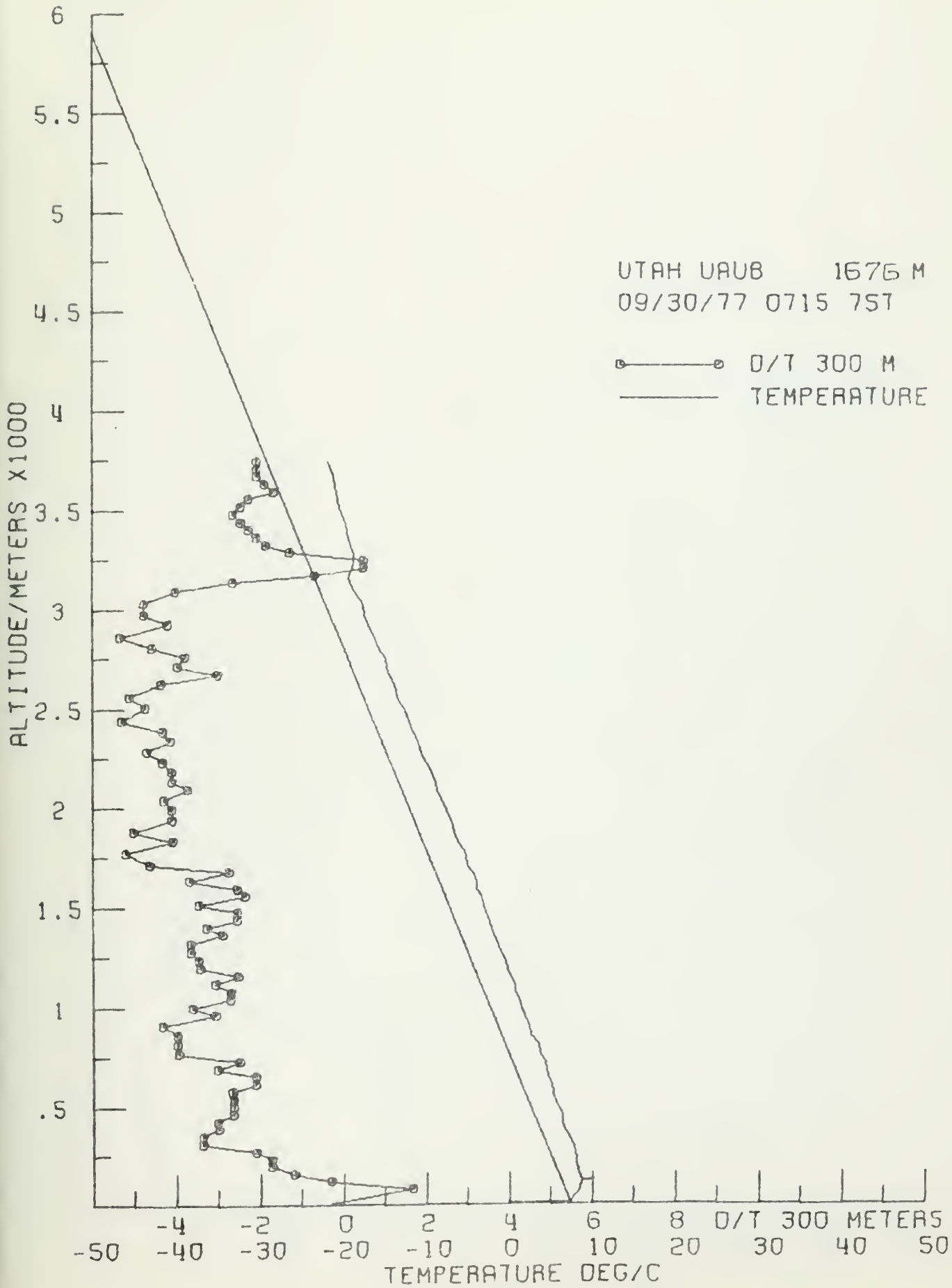


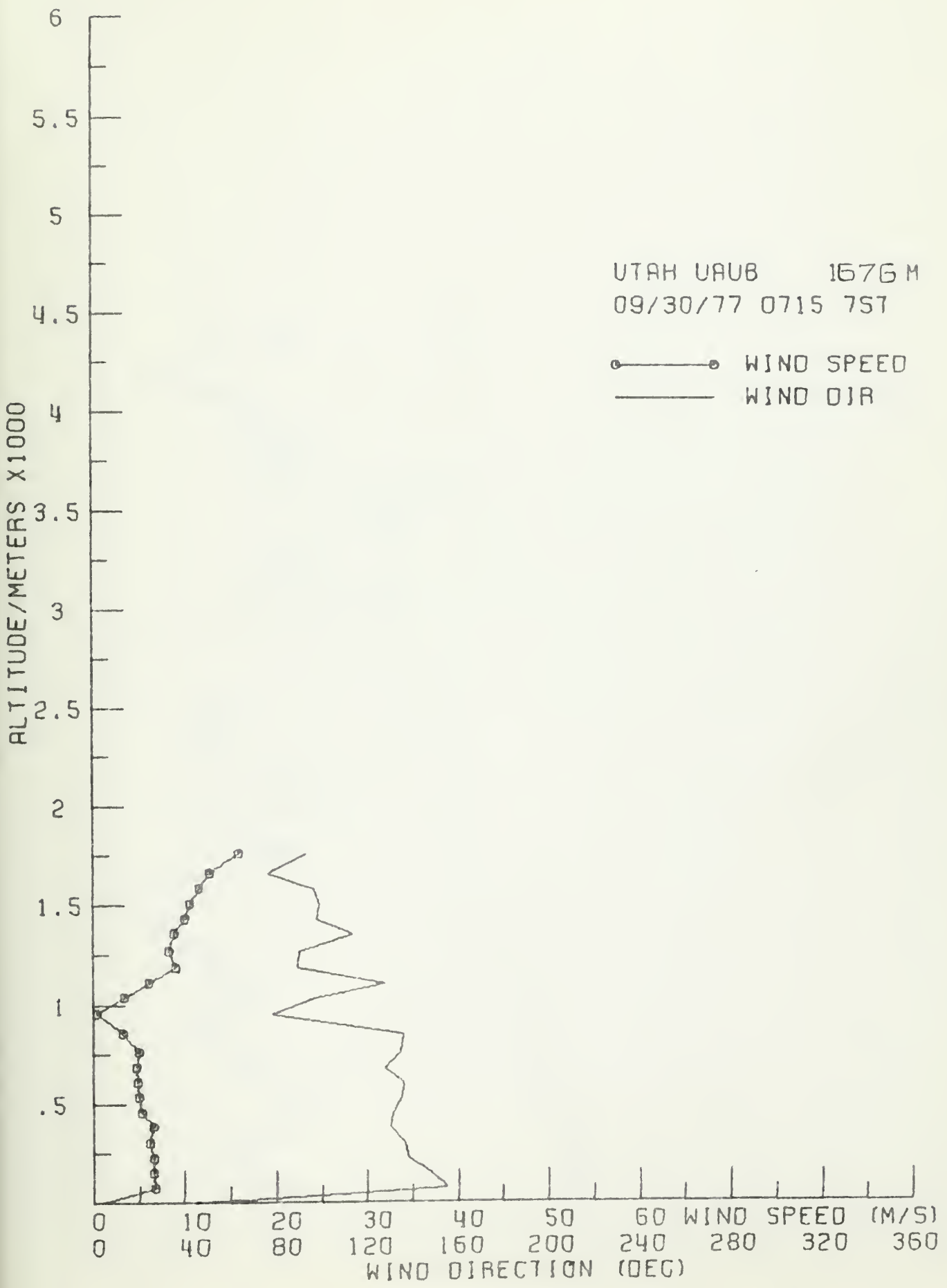


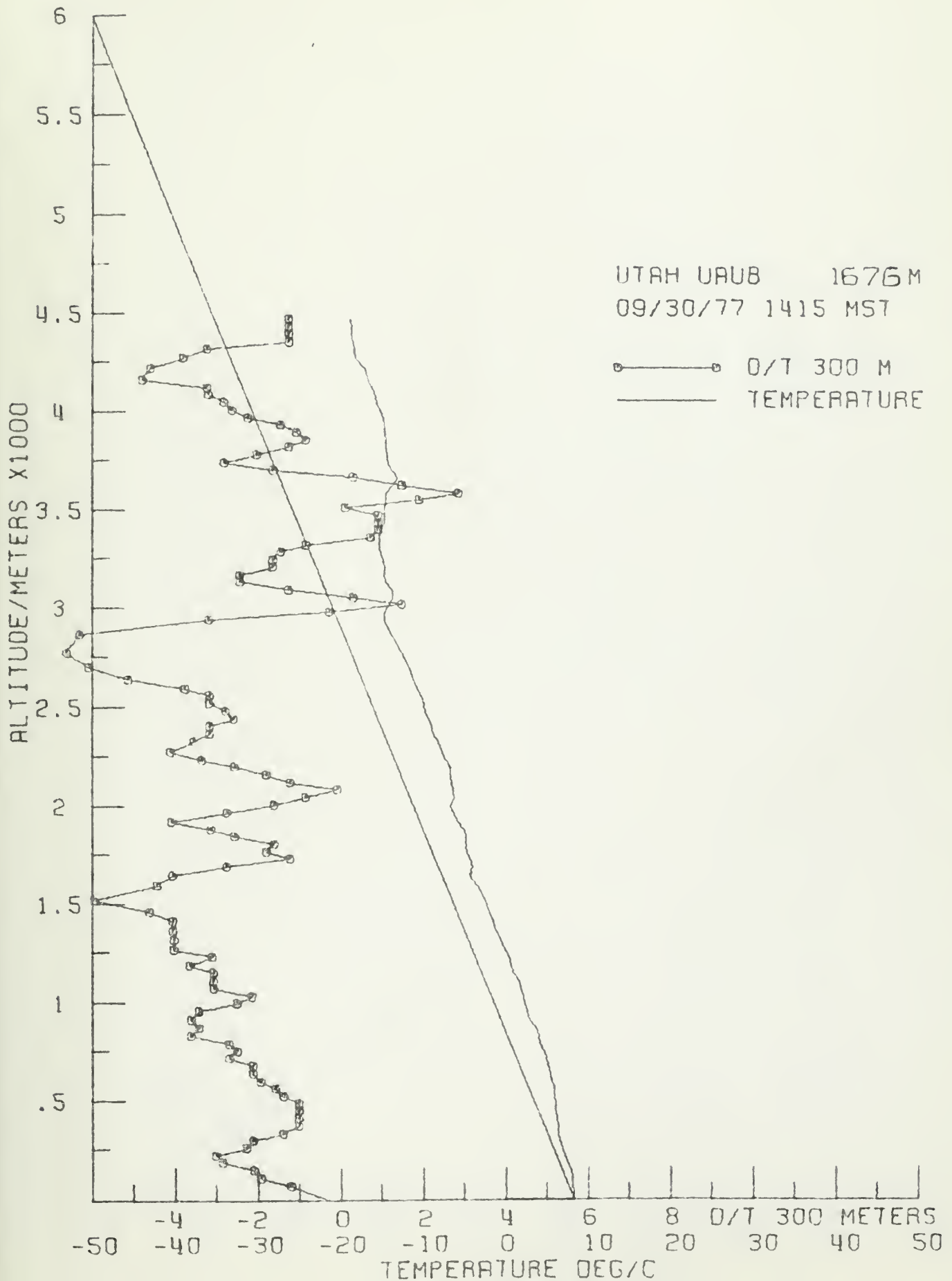


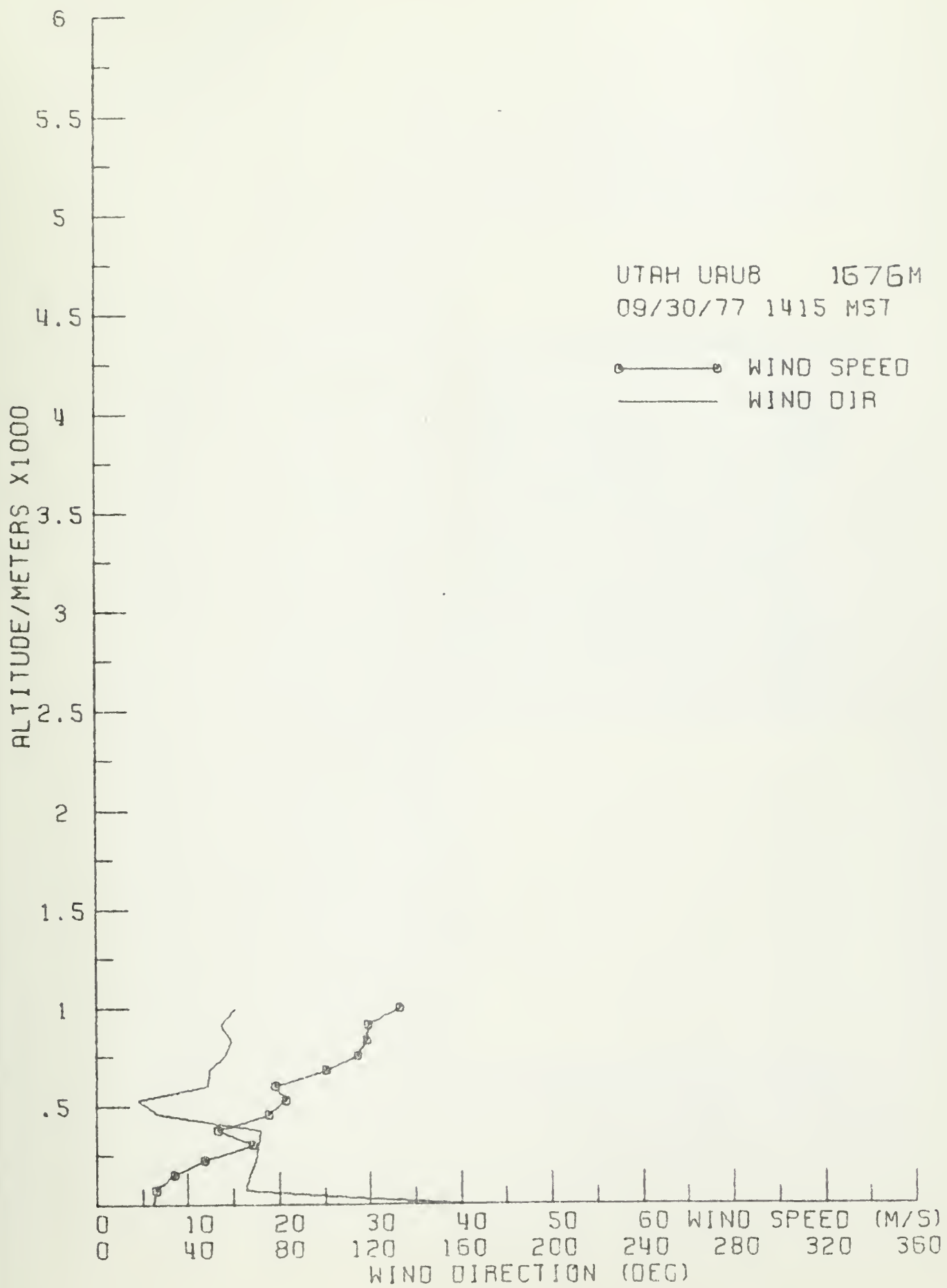












Form 1279-3
(June 1984)

BORROWER'S C

IN 888-0111-0047 0001

Monthly progress report
for the period

DATE LOANED	BORROWER

USDI - BLM

